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OM protein - protein search, using sw model

Run on: November 28, 2003, 14:24:03; Search time 41 Seconds

(without alignments)

19.357 Million cell updates/sec

Title: US-09-228-866-45

Perfect score: 5

Sequence: 1 XSRLX 5

Scoring table: OLIGO

Gapop 60.0 , Gapext 60.0

Searched: 1107863 seqs, 158726573 residues

Word size : 0

Total number of hits satisfying chosen parameters: 408126

Minimum DB seq length: 5
Maximum DB seq length: 23

Post-processing: Listing first 100 summaries

Database : A Geneseg 19Jun03:*

2: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1981.DAT:* /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1982.DAT:* /SIDS1/qcqdata/geneseq/geneseqp-embl/AA1983.DAT:* 5: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1984.DAT:* 6: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1985.DAT:* 7: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1986.DAT:* 8: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1987.DAT:* 9: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1988.DAT:* 10: /SIDS1/gcqdata/geneseq/geneseqp-embl/AA1989.DAT:* 11: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1990.DAT:* 12: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1991.DAT:* 13: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1992.DAT:* 14: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1993.DAT:* /SIDS1/qcqdata/qeneseq/geneseqp-embl/AA1994.DAT:* 15: /SIDS1/qcqdata/geneseq/geneseqp-embl/AA1995.DAT: * 16: /SIDS1/qcqdata/qeneseq/qeneseqp-embl/AA1996.DAT: * 17: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1997.DAT:* 18: 19: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1998.DAT:* 20: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1999.DAT:* 21: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA2000.DAT:* 22: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA2001.DAT:*

1: /SIDS1/qcqdata/qeneseq/qeneseqp-embl/AA1980.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed,

/SIDS1/gcgdata/geneseq/geneseqp-embl/AA2002.DAT:*/SIDS1/gcgdata/geneseq/geneseqp-embl/AA2003.DAT:*

and is derived by analysis of the total score distribution.

SUMMARIES

		0			DOM MICE	
		%				
Result	0	Query	T 1-	D.D.	10	Deganistics
No.	Score	Match	Length	DB	ID	Description
1	3	60.0	5	17	AAY16472	Cyclic thrombin re
2	3	60.0	5	18	AAW12483	Interleukin-6 anta
3	3	60.0	5	20	AAW94152	BC loop sequence o
4	3	60.0	5	21	AAB11575	SEN virus epitope
5	3	60.0	5	21	AAY83307	Peptide motif of S
6	3	60.0	5	22	AAE03440	Human gene 14 enco
7	3	60.0	5	22	AAE03489	Human gene 14 enco
8	3	60.0	5	22	AAB49812	Human endostatin p
9	3	60.0	5	23	AAE28216	Tobacco mosaic vir
10	3	60.0	5	23	ABG63387	Human albumin fusi
11	3	60.0	5	23	ABG63388	Human albumin fusi
12	3	60.0	5	23	ABB94397	Ubiquitin binding
13	3	60.0	5	23	ABB94451	Ubiquitin binding
13	3	60.0	5	23	AAE19260	Human recombinant
	3	60.0	5	24		Cucurbita sp. pept
15	3		6	17	ABP55341	Cyclic thrombin re
16		60.0			AAY16474	Hexapeptide epitop
17	3	60.0	6	18	AAW26814	Human neurofilamen
18	3	60.0	6	19	AAY20645	
19	3	60.0	6	19	AAW75318	Hexapeptide #11 bi
20	3	60.0	6	19	AAW75386	Hexapeptide #11 bi
21	3	60.0	6	20	AAY55284	ATCC HB 11885 mono
22	3	60.0	6	21	AAY87030	Human haematopoiet
23	3	60.0	6	21	AAY43709	Sequence of the se
24	3	60.0	6	21	AAY43740	Sequence of the se
25	3	60.0	6	22	AAM97492	Human peptide #767
26	3	60.0	6	22	AAB49814	Human endostatin p
27	3	60.0	6	22	AAB49815	Human endostatin p
28	3	60.0	6	23	ABG60376	Selective targetin
29	3	60.0	7	3	AAP20402	Secretin precursor
30	3	60.0	7	4	AAP30020	Intermediate of se
31	3	60.0	7	18	AAW11186	Brain homing pepti
32	3	60.0	7	18	AAW27419	CDR2 from light ch
33	3	60.0	7	20	AAY48768	Membrane dipeptida
34	3	60.0	7	20	AAY48912	Membrane dipeptida
35	3	60.0	7	20	AAY16941	Heat shock protein
36	3	60.0	7	20	AAY05017	Tumour antigen ant
37	3	60.0	7	20	AAY05021	Tumour antigen ant
38	3	60.0	7	21	AAB28344	Neuropeptide NPFII
39	3	60.0	7	21	AAB36149	Neuropeptide NPFII
40	3	60.0	7	21	AAB26822	Peptidic membrane
41	3	60.0	7	21	AAB17236	SH3 antagonist pep
42	3	60.0	7	21	AAB12005	Brain homing pepti
43	3	60.0	7	21	AAY94221	Murine 16E10 light
44	3	60.0	7	22	AAU72083	Melanoma antigen,
45	3	60.0	7	22	AAE11811	Phage peptide #19
46	3	60.0	7	22	AAG63615	Complementarity de
47	3	60.0	7	22	AAG63621	Complementarity de
48	3	60.0	7	22	AAG98766	Human cell death p
49	3	60.0	7	22	AAB84974	Clone 2 scFv CDR L
50	3	60.0	7	22	AAB84986	G12 scFv CDR L2 re

51	3	60.0	7	22	AAB30666	Neuropeptide F (NP
52	3	60.0	7	22	AAB49817	Human endostatin p
53	3	60.0	7	22	AAB49818	Human endostatin p
54	3	60.0	7	22	AAB49819	Human endostatin p
55	3	60.0	7	23	ABP66477	Human RSV antibody
56	3	60.0	7	23	ABP49256	Zinc finger protei
57	3	60.0	7	23	ABB73229	Src homology3 (SH3
58	3	60.0	7	23	AAU80633	Javelin peptide #6
59	3	60.0	7	23	AAU10722	Brain homing pepti
60	3	60.0	7	23	AAU11497	PAdV terminal prot
61	3	60.0	7	23	AAU11498	PAdV-5 terminal pr
62	3	60.0	7	23	AAU70359	Mouse Kappa V ligh
63	3	60.0	7	24	ABU69340	Respiratory syncyt
64	3	60.0	7	24	ABP56502	S. pneumoniae PPS-
65	3	60.0	8	15	AAR59433	Gp2b(896-903) pept
66	3	60.0	8	15	AAR48371	Peptide fragment w
67	3	60.0	8	15	AAR58622	GP2b residues 896-
68	3	60.0	8	15	AAR66119	Peptide derived fr
69	3	60.0	8	16	AAR79529	Anti-human chorion
70	3	60.0	8	17	AAR91288	Anti-idiotypic T-c
71	3	60.0	8	17	AAR90406	Hybridoma ATCC HB-
72	3	60.0	8	18	AAW26811	Octapeptide epitop
73	3	60.0	8	18	AAW26812	Octapeptide epitop
74	3	60.0	8	18	AAW26818	Hepatitis C virus
75	3	60.0	8	18	AAW26807	Octapeptide epitop
76 	3	60.0	8	18	AAW26808	Octapeptide epitop
77	3	60.0	8	18	AAW26809	Octapeptide epitop
78	3	60.0	8	18	AAW26810	Octapeptide epitop
79	3	60.0	8	18	AAW10754	Binding peptide #1
80	3	60.0	8	19	AAW57524	Molecular mimetic
81	3	60.0	8	20	AAY32116	Maize id gene null
82	3	60.0	8	20	AAY53393	HIV-1 nef protein
83	3	60.0	8	20	AAY53467	HIV-1 nef protein
84	3	60.0	8	20	AAY55133	ATCC HB 11885 mono
85	3	60.0	8	20	AAY40242	Amino acid sequenc
86	3	60.0	8	20	AAY40316	Amino acid sequenc
87	3	60.0	8	20	AAY26734	HIV-derived lipope
88	3	60.0	8	20	AAY26808	HIV-derived lipope
89	3	60.0	8	20	AAY00373	Fragment of human
90	3	60.0	8	20	AAW67658	LXXLL signature mo
91	3	60.0	8	21	AAY86587	Telomerase peptide
92	3	60.0	8	21	AAY86879	Human haematopoiet
93	3	60.0	8	22	AAG77882	Human C35 peptide
94	3	60.0	8	22	ABB12719	Human C35 peptide
95	3	60.0	8	22	ABB12721	Human C35 peptide
96	3	60.0	8	22	ABB13695	Human C35 peptide
97	3	60.0	8	22	ABB13715	Human C35 peptide
98	3	60.0	8	22	ABB14655	Human C35 peptide
99	3	60.0	8	22	AAE12847	Human growth hormo
100	3	60.0	8	22	AAE12850	Human growth hormo

```
ID
    AAY16472 standard; peptide; 5 AA.
XX
AC
    AAY16472;
XX
     06-AUG-1999 (first entry)
DT
XX
     Cyclic thrombin receptor peptide analogue.
DE
XX
KW
     Peptide analogue; N-terminal domain; cancer; angiogenesis; metastasis;
    human G protein linked thrombin receptor; cyclic; antagonist; agonist;
KW
KW
     cardiovascular disease; inflammatory disease; gastrointestinal disease;
KW
     osteoporosis; tissue injury; tissue repair; nerve regeneration;
     thrombin-mimetic study; platelet function; myocardial infarction;
KW
KW
     arterial plaque formation.
XX
OS
     Synthetic.
XX
     US5516889-A.
PN
XX
PD
     14-MAY-1996.
XX
PF
     17-MAR-1995;
                   95US-0405933.
XX
PR
     21-JUN-1993;
                   93US-0080643.
PR
     17-MAR-1995;
                    95US-0405933.
XX
PΑ
     (UYTE-) UNIV TECHNOLOGIES INT INC.
XX
PΙ
     Hollenberg MD, Matsoukas JM, Moore GJ;
XX
     WPI; 1996-251084/25.
DR
XX
PΤ
     New cyclic peptide(s) derived from the protein G linked thrombin
РΤ
     receptor - are agonists or antagonists for treating diseases
РΤ
     involving this receptor, e.g. myocardial infarction
XX
PS
     Disclosure; Column 33; 36pp; English.
XX
CC
     AAY16465-98 represent peptide analogues of the N-terminal domain of
CC
     the human G protein linked thrombin receptor sequence. The peptides,
CC
     which may be cyclic, have the formula X1-Psi-X2-X3-Omega-X4 in which
CC
     Psi = any (non-)natural aromatic amino acid (aa); Omega = any
CC
     (non-)natural basic aa or derivatives; X1 is absent or is a natural
     aa, 1-3C acyl or 1-5C alkyl; X2 = any natural aa; X3 is absent or is
CC
CC
     any natural aa; and X4 is absent or is any natural aa. The peptides
CC
     are are antagonists and agonists for treating disorders involving
CC
     thrombin receptors, e.g. cardiovascular, inflammatory or
CC
     gastrointestinal diseases; osteoporosis; tissue injury and repair
CC
     (including nerve regeneration); and cancer (by inhibiting angiogenesis
CC
     and metastasis). They may also be used diagnostically and in
CC
     thrombin-mimetic studies. The peptide analogues are particularly used to
CC
     modulate platelet function (acting synergistically with aspirin-type
CC
     compounds) and so are useful in cases of myocardial infarction, as well
CC
     as to coat prostheses and to reduce arterial plaque formation.
XX
SO
     Sequence
                5 AA;
```

```
60.0%; Score 3; DB 17; Length 5;
  Ouery Match
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
          3; Conservative 0; Mismatches 0; Indels
                                                               0; Gaps
 Matches
                                                                              0;
            2 SRL 4
Qу
              |\cdot|
Db
           1 SRL 3
RESULT 2
AAW12483
     AAW12483 standard; peptide; 5 AA.
XΧ
AC
    AAW12483;
XX
DT
     22-APR-1997 (first entry)
XX
     Interleukin-6 antagonist 48.
DE
XX
KW
     Interleukin-6; IL-6; antagonist; inhibitor; autoimmune disease;
KW
     skin; intestine; systemic lupus erythematosus; chronic rheumatism.
XX
OS
     Synthetic.
XX
FH
     Key
                     Location/Qualifiers
FΤ
     Modified-site
FT
                     /note= "amidated"
XX
PN
     JP08311098-A.
XX
     26-NOV-1996.
PD
XX
PF
     22-MAY-1995;
                   95JP-0146742.
XX
     22-MAY-1995;
                  95JP-0146742.
PR
XΧ
     (DAIL ) DAICEL CHEM IND LTD.
PΑ
     (FUJI ) FUJISAWA PHARM CO LTD.
PΑ
XX
DR
     WPI; 1997-061811/06.
XX
     Interleukin-6 antagonistic peptide(s) comprising arginine - useful
PΤ
     for treating autoimmune, renal, skin and intestinal diseases
PT
XX
PS
     Example 48; Page 12; 20pp; Japanese.
XX
CC
     The present peptide is a specific example of new interleukin-6
     antagonists of the general formula X-A-B-D-Y, where X is 1-10 amino
CC
     acids or an amino group protecting group; Y is 1-5 amino acids, a
CC
     carboxyl group protecting group or an amide; A is preferably Arg
CC
     having an opt. protected guanidino group but can be any amino acid;
CC
CC
     D is Arg having an opt. protected guanidino group and B is preferably
     a Leu residue but can be any amino acid, including non-natural
CC
     amino acids, opt. having a protected side-chain. The peptides are
CC
     useful for treating autoimmune diseases (e.g. systemic lupus
CC
     erythematosus or chronic rheumatism), renal, skin and intestinal
CC
CC
     diseases.
```

```
XX
SO
     Sequence 5 AA;
                          60.0%; Score 3; DB 18; Length 5;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
                                                 0; Indels
                                                                 0; Gaps
           3; Conservative 0; Mismatches
                                                                             0;
            2 SRL 4
QУ
              | | |
            2 SRL 4
Db
RESULT 3
AAW94152
     AAW94152 standard; peptide; 5 AA.
XX
AC
     AAW94152;
XX
DT
     14-APR-1999 (first entry)
XX
     BC loop sequence of ubiquitin-binding monobody clone 411.
DE
XX
KW
     Fibronectin type III; Fn3; monobody; beta-strand domain; loop region;
     specific binding partner; SBP; catalysis; LRS; ubiquitin.
KW
XX
OS
     Saccharomyces cerevisiae.
XX
PN
     WO9856915-A2.
XX
     17-DEC-1998.
PD
XX
PF
     12-JUN-1998;
                   98WO-US12099.
XX
     12-JUN-1997:
                   97US-0049410.
PR
ХX
PΑ
     (RESE ) RESEARCH CORP TECHNOLOGIES INC.
XX
PΙ
     Koide S;
XX
     WPI; 1999-060331/05.
DR
XX
     Production of antibody compounds, particularly catalytic antibodies
PT
     - using a fibronectin type III molecular scaffolding comprising
PT
     beta-strand domain sequences and modified in one or more loop
PT
PΤ
     sequences
XX
PS
     Example 10; Page 41; 96pp; English.
XX
     The invention relates to a synthetic fibronectin type III (Fn3)
CC
     polypeptide monobody that comprises Fn3 beta-strand domain sequences
CC
     that are linked to loop region sequences (LRSs). One or more of the loop
CC
CC
     sequences in the synthetic Fn3 vary by deletion, insertion, or
CC
     replacement of at least 2 amino acids from the corresponding LRss in
     wild-type Fn3. Host cells containing an expression vector comprising the
CC
CC
     synthetic Fn3 nucleic acid are used for the production of the Fn3
     monobody. The invention also provides methods of identifying the amino
CC
     acid sequence of a polypeptide molecule (i) capable of binding to a
CC
```

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specific binding partner (SBP) so as to form a polypeptide: SBP complex;
     (ii) capable of catalysing a chemical reaction with a catalysed rate
CC
     constant, Kcat, and an uncatalysed rate constant, Kuncat, such that the
CC
     ratio of the Kcat/kuncat is greater than 10. Sequences AAW94147-54
CC
CC
     represent BC loop sequences of yeast ubiquitin-binding monobodies.
ХX
SQ
    Sequence
               5 AA;
                          60.0%; Score 3; DB 20; Length 5;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
  Matches
           3; Conservative 0; Mismatches
                                                0; Indels
                                                                 0; Gaps
                                                                             0;
           2 SRL 4
Qу
              |\cdot|
           1 SRL 3
Db
RESULT 4
AAB11575
ID
    AAB11575 standard; Peptide; 5 AA.
XX
AC
    AAB11575;
XX
DT
     12-OCT-2000 (first entry)
XX
DE
     SEN virus epitope mapping peptide SEQ ID NO: 165.
XX
KW
     SEN virus; SENV; gastrointestinal tract disorder; inflammatory disease;
KW
     proliferative disorder; hepatopathy; hepatitis; viral infection;
KW
     vaccination; gene therapy.
XX
OS
     Hepatitis virus.
XX
PN
    WO200028039-A2.
XX
PD
     18-MAY-2000.
XX
PF
     09-NOV-1999;
                  99WO-EP08566.
XX
PR
     10-NOV-1998;
                   98IT-MI02437.
PR
     30-APR-1999;
                   99IT-MI00923.
PR
     14-MAY-1999;
                   99EP-0830298.
PR
     16-JUL-1999;
                   99EP-0113932.
XX
PΑ
     (DIAS-) DIASORIN SRL.
XX
PΙ
     Primi D, Fiordalisi G, Mantero GL, Mattioli S, Sottini A;
PΙ
     Bonelli F, Vaglini L, Olivero P, Dal Corso A, Bonelli M;
XX
DR
     WPI; 2000-376551/32.
XX
PТ
     Nucleic acids representing the genome of the SEN virus (SENV) and
PT
     encoded proteins, useful for treatment of hepatopathies, inflammatory
PΤ
     diseases and proliferative disorders such as cancer -
XX
PS
     Example 28; Page 104; 392pp; English.
XX
```

```
CC
     The present invention is concerned with the sequence of the genome of
CC
     the SEN virus (SENV), and the proteins encoded by it. SENV is thought to
     be the cause of hepatopathies which are not linked to the presence of
CC
     the hepatitis A, B and E viruses in man. The genome and proteins of this
CC
     virus can be used in gene therapy and vaccination against the virus,
CC
     which also causes disorders of the gastrointestinal tract, including
CC
    Crohn's disease and lupus erythematosus, inflammatory diseases, and
CC
     proliferative disorders such as cancer. The peptides AAB11549-B11581
CC
CC
    were used in epitope mapping assays to identify the immunologically
CC
    reactive areas of the SENV proteins.
XX
SO
     Sequence 5 AA;
                          60.0%; Score 3; DB 21; Length 5;
 Query Match
 Best Local Similarity 100.0%; Pred. No. 9.3e+05;
 Matches
          3; Conservative 0; Mismatches 0; Indels
                                                              0; Gaps
                                                                             0;
           2 SRL 4
QУ
              1 SRL 3
Dh
RESULT 5
AAY83307
    AAY83307 standard; Peptide; 5 AA.
XX
AC
    AAY83307;
XX
DT
     16-AUG-2000 (first entry)
XX
DE
     Peptide motif of SDD1 subtilisin-like serine protease.
XX
KW
     SDD1; serine protease; subtilisin; transgenic plants; dry weight;
     stomata; sugar; water; protein; CO 2; H 2O; CO2; H2O;
KW
KW
     crop protection; feed; foodstuffs.
ХX
0S
     Synthetic.
OS
    Arabidopsis thaliana.
XX
ΡN
    WO200022144-A2.
XX
     20-APR-2000.
PD
XX
PF
     12-OCT-1999;
                  99WO-EP07633.
XX
PR
     12-OCT-1998; 98EP-0119244.
XX
PA
     (PLAC ) MAX PLANCK GES FOERDERUNG WISSENSCHAFTEN.
PΑ
     (PLAN-) PLANTTEC BIOTECHNOLOGIE GMBH.
XX
PΙ
     Berger D, Altmann T;
XX
DR
     WPI; 2000-317995/27.
XX
     Novel recombinant DNA molecules encoding subtilisin-like serine
PT
PT
     protease, useful for producing transgenic plants with altered stomata,
PT
     lower water consumption and enhanced diseased resistance
```

```
PS
     Disclosure; Page 9; 101pp; English.
XX
CC
     Sequences encoding SDD1, a subtilisin-like serine protease, can be
CC
     used to produce transgenic plants with altered stomata
CC
     characterisitics. These plants exhibit improved freshness,
CC
     increased dry weight, reduced leaf temperatures, reduced water loss
CC
     and lower water consumption and for enhancing the sugar and/or
     protein content of plant leaves, modulating CO_2 uptake into and H 20
CC
CC
     release from leaves, for sustained photosynthesis under high
CC
     intensity conditions or for the improvement of disease resistance
CC
     of plants. The transgenic plants and cells of such plants are useful
CC
     in the preparation of feed, food or additives.
XX
SO
     Sequence
                5 AA;
  Query Match
                          60.0%; Score 3; DB 21; Length 5;
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
            3; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
                                                                              0;
            2 SRL 4
QУ
              111
            2 SRL 4
Db
RESULT 6
AAE03440
     AAE03440 standard; peptide; 5 AA.
XX
AC
    AAE03440;
XX
     10-AUG-2001 (first entry)
\mathsf{D}\mathbf{T}
XX
DE
     Human gene 14 encoded secreted protein fragment HHFUC40, SEQ ID NO: 123.
XX
KW
     Human; secreted protein; proliferative disorder; cancer; tumour; asthma;
KW
     foetal abnormality; developmental abnormality; haematopoietic disorder;
     immune system disorder; AIDS; autoimmune disease; rheumatoid arthritis;
KW
KW
     Parkinson's disease; cognitive disorder; schizophrenia; skin disorder;
KW
     psoriasis; sepsis; diabetes; atherosclerosis; cardiovascular disorder;
KW
     inflammation; neurological disorder; Alzheimer's disease; food additive;
KW
     angiogenic disorder; kidney disorder; gastrointestinal disorder; allergy;
KW
     pregnancy-related disorder; endocrine disorder; infection; wound healing;
KW
     cell culture; chemotaxis; vulnerary; binding partner identification;
KW
     gene therapy.
XX
OS
     Homo sapiens.
XX
PN
    WO200132675-A1.
XX
PD
     10-MAY-2001.
XX
ΡF
     25-OCT-2000; 2000WO-US29363.
XX
PR
     29-OCT-1999;
                    99US-0162239.
PR
     30-JUN-2000; 2000US-0215139.
XX
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XX

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XX
PΙ
     Ruben SM, Komatsoulis GA, Wei P, Baker KP, Young PE;
XX
DR
     WPI: 2001-328772/34.
DR
     N-PSDB; AAD07822.
XX
PΤ
     Thirty two human secreted proteins, useful for treating cancers,
PΤ
     hyperproliferative disorders, inflammatory disorders, neurological
РΤ
     disorders, autoimmune diseases and cardiovascular disorders -
XX
PS
     Claim 11; Page 482; 576pp; English.
XX
CC
     AAD07809-AAD07907 represent cDNAs corresponding to 32 human secreted
CC
     protein genes, and AAE03427-AAE03523 represent the proteins they encode.
CC
     AAE03524-AAE03537 represent human secreted protein fragments or variants.
CC
     The secreted proteins and their genes are useful for preventing, treating
CC
     or ameliorating medical conditions, e.g., by protein or gene therapy.
CC
     Pathological conditions can be diagnosed by determining the amount of the
CC
     new protein in a sample or by determining the presence of mutations in
CC
     the new genes. Specific uses are described for each of the 32 genes,
CC
     based on the tissues in which they are most highly expressed, and include
CC
     developing products for the diagnosis or treatment of proliferative
CC
     disorders, cancer, tumours, foetal and developmental abnormalities,
CC
     haematopoietic disorders, diseases of the immune system, AIDS, autoimmune
CC
     diseases (e.g., rheumatoid arthritis), inflammation, allergies,
CC
     neurological disorders (e.g., Alzheimer's disease, Parkinson's disease),
CC
     cognitive disorders, schizophrenia, asthma, skin disorders (e.g.,
CC
     psoriasis), sepsis, diabetes, atherosclerosis, cardiovascular disorders,
CC
     angiogenic disorders, kidney disorders, gastrointestinal disorders,
CC
     pregnancy-related disorders, endocrine disorders, and infections. The
CC
     proteins can also be used to aid wound healing and epithelial cell
CC
     proliferation, to prevent skin aging due to sunburn, to maintain organs
CC
     before transplantation, for supporting cell culture of primary tissues,
CC
     to regenerate tissues, to identify their cognate ligands or binding
CC
     partners, and in chemotaxis, and can be used as a food additive or
CC
     preservative to modify storage properties. Antibodies specific for a
CC
     protein of the invention can be used in alleviating symptoms associated
CC
     with the disorders mentioned above, and in diagnostic immunoassays e.g.,
CC
     radioimmunoassay or enzyme linked immunosorbent assay (ELISA).
CC
     The present sequence represents a human secreted protein fragment of
CC
     the invention.
XX
SO
     Sequence 5 AA;
                          60.0%; Score 3; DB 22; Length 5;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
            3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                             0:
            2 SRL 4
Qу
              Dh
            2 SRL 4
RESULT 7
```

(HUMA-) HUMAN GENOME SCI INC.

PA

AAE03489

ID AAE03489 standard; peptide; 5 AA.

```
XX
AC
     AAE03489;
XX
DT
     10-AUG-2001 (first entry)
XX
     Human gene 14 encoded secreted protein HHFUC40 fragment, SEQ ID NO:172.
DE
XX
KW
     Human; secreted protein; proliferative disorder; cancer; tumour; asthma;
KW
     foetal abnormality; developmental abnormality; haematopoietic disorder;
KW
     immune system disorder; AIDS; autoimmune disease; rheumatoid arthritis;
KW
     Parkinson's disease; cognitive disorder; schizophrenia; skin disorder;
KW
     psoriasis; sepsis; diabetes; atherosclerosis; cardiovascular disorder;
KW
     inflammation; neurological disorder; Alzheimer's disease; food additive;
     angiogenic disorder; kidney disorder; gastrointestinal disorder; allergy;
KW
     pregnancy-related disorder; endocrine disorder; infection; wound healing;
KW
KW
     cell culture; chemotaxis; vulnerary; binding partner identification;
KW
     gene therapy.
XX
OS
     Homo sapiens.
XX
ΡN
     WO200132675-A1.
XX
PD
     10-MAY-2001.
XX
PF
     25-OCT-2000; 2000WO-US29363.
XX
PR
     29-OCT-1999;
                   99US-0162239.
     30-JUN-2000; 2000US-0215139.
PR
XX
     (HUMA-) HUMAN GENOME SCI INC.
PΑ
XX
PΙ
     Ruben SM, Komatsoulis GA, Wei P, Baker KP, Young PE;
XX
     WPI; 2001-328772/34.
DR
DR
     N-PSDB; AAD07871.
XX
PT
     Thirty two human secreted proteins, useful for treating cancers,
PT
     hyperproliferative disorders, inflammatory disorders, neurological
PT
     disorders, autoimmune diseases and cardiovascular disorders -
XX
PS
     Claim 11; Page 508; 576pp; English.
XX
CC
     AAD07809-AAD07907 represent cDNAs corresponding to 32 human secreted
CC
     protein genes, and AAE03427-AAE03523 represent the proteins they encode.
CC
     AAE03524-AAE03537 represent human secreted protein fragments or variants.
CC
     The secreted proteins and their genes are useful for preventing, treating
CC
     or ameliorating medical conditions, e.g., by protein or gene therapy.
CC
     Pathological conditions can be diagnosed by determining the amount of the
CC
     new protein in a sample or by determining the presence of mutations in
CC
     the new genes. Specific uses are described for each of the 32 genes,
CC
     based on the tissues in which they are most highly expressed, and include
CC
     developing products for the diagnosis or treatment of proliferative
CC
     disorders, cancer, tumours, foetal and developmental abnormalities,
CC
     haematopoietic disorders, diseases of the immune system, AIDS, autoimmune
CC
     diseases (e.g., rheumatoid arthritis), inflammation, allergies,
CC
     neurological disorders (e.g., Alzheimer's disease, Parkinson's disease),
```

cognitive disorders, schizophrenia, asthma, skin disorders (e.g.,

CC

```
CC
     psoriasis), sepsis, diabetes, atherosclerosis, cardiovascular disorders.
CC
     angiogenic disorders, kidney disorders, gastrointestinal disorders,
CC
     pregnancy-related disorders, endocrine disorders, and infections. The
CC
     proteins can also be used to aid wound healing and epithelial cell
     proliferation, to prevent skin aging due to sunburn, to maintain organs
CC
CC
     before transplantation, for supporting cell culture of primary tissues,
CC
     to regenerate tissues, to identify their cognate ligands or binding
CC
     partners, and in chemotaxis, and can be used as a food additive or
CC
     preservative to modify storage properties. Antibodies specific for a
CC
     protein of the invention can be used in alleviating symptoms associated
CC
     with the disorders mentioned above, and in diagnostic immunoassays e.g.,
CC
     radioimmunoassay or enzyme linked immunosorbent assay (ELISA).
CC
     The present sequence represents a human secreted protein fragment of
CC
     the invention.
XX
SO
     Sequence
                5 AA;
  Query Match
                          60.0%; Score 3; DB 22; Length 5;
  Best Local Similarity
                          100.0%; Pred. No. 9.3e+05;
  Matches
            3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                              0;
            2 SRL 4
Qу
              |\cdot|
Db
            2 SRL 4
RESULT 8
AAB49812
ID
    AAB49812 standard; Peptide; 5 AA.
XX
AC
    AAB49812;
XX
DT '02-MAR-2001 (first entry)
XX
DE
    Human endostatin peptide fragment SEQ ID NO: 25.
XX
KW
     Endostatin; antiangiogenic; angiogenesis; human; mouse; chicken;
     cancer; inflammation; angiogenesis-dependent disease.
KW
XX
OS
     Homo sapiens.
XX
PN
    WO200067771-A1.
XX
PD
    16-NOV-2000.
XX
PF
     02-MAY-2000; 2000WO-US12063.
XX
PR
     06-MAY-1999;
                    99US-0132907.
PR
     14-JUL-1999;
                    99US-0353333.
ХХ
PΑ
     (BURN-) BURNHAM INST.
XX
ΡŢ
    Vuori K;
XX
DR
    WPI; 2001-040937/05.
XX
PT
     Endostatin peptide comprising at least four endostatin amino acid
```

```
PT
     residues are e.g. angiogenesis inhibitors for treating cancer and
PΤ
     diabetic retinopathy
XX
PS
     Disclosure; Page 126; 146pp; English.
XX
CC
     The present invention provides endostatin peptides which can be used in
CC
     the modulation of angiogenesis. This is useful in the treatment of
CC
     cancers, inflammation, rheumatoid arthritis, chronic articular
     rheumatism, psoriasis, disorders associated with inopportune invasion of
CC
CC
     vessels such as diabetic retinopathy, neovascular glaucoma, retinopathy
CC
     of prematurity, macular degeneration, corneal graft rejection,
CC
     retrolental fibroplasia, rubeosis, capillary proliferation in
CC
     atherosclerotic plaques and osteoporosis. Other angiogenesis-dependent
CC
     diseases include Osler-Webber syndrome, myocardial angiogenesis, plaque
     neovasculisation, telangiectasia, haemophiliac joints and wound
CC
    granulation. In addition, the peptides can be used as birth control
CC
CC
    agents.
XX
SO
    Sequence
                5 AA;
  Query Match
                          60.0%; Score 3; DB 22; Length 5;
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
  Matches
           3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
            2 SRL 4
Qу
              1 SRL 3
Db
RESULT 9
AAE28216
     AAE28216 standard; peptide; 5 AA.
XX
AC
    AAE28216;
ХX
DТ
    27-DEC-2002 (first entry)
XX
DE
     Tobacco mosaic virus rGAL-25 vector peptide:
XX
KW
     Alpha-galactosidase; lysosomal enzyme; lysosomal storage disease;
KW
     therapeutic; rGAL-25.
XX
0S
     Tobacco mosaic virus.
XX
    US2002088024-A1.
PN
XX
     04-JUL-2002.
PD
XX
PF
     13-NOV-2001; 2001US-0993059.
XX
PR
     26-JUL-2000; 2000US-0626127.
XX
PΑ
     (GARG/) GARGER S J.
     (TURP/) TURPEN T H.
PΑ
PΑ
     (KUMA/) KUMAGAI M H.
XX
     Garger SJ, Turpen TH, Kumagai MH;
PΤ
```

```
XX
DR
     WPI; 2002-681656/73.
XX
PT
     Novel human alpha-galactosidase polypeptide useful for treating
PT
     lysosomal storage diseases
XX
PS
     Claim 1; Page 59; 88pp; English.
XX
CC
     The invention relates to human alpha-galactosidase truncated at the
CC
     carboxy terminus and the production of enzymatically active recombinant
CC
     human and animal lysosomal enzymes. The invention is useful for producing
CC
     lysosomal enzymes for treating lysosomal storage diseases, producing
CC
     altered or mutated proteins, enzymatically active or otherwise, to serve
CC
     as precursors or substrates for further in vivo or in vitro processing
CC
     to a specialised industrial form for research or therapeutic uses, to
CC
     produce more effective therapeutic enzyme, for producing antibodies
CC
     against lysosomal enzymes for medical diagnostic use, and in any
CC
     commercial process that involves substrate hydrolysis. The present
CC
     sequence is Tobacco mosaic virus rGAL-25 vector peptide.
XX
SO
     Sequence
               5 AA;
  Query Match
                          60.0%; Score 3; DB 23; Length 5;
  Best Local Similarity
                          100.0%; Pred. No. 9.3e+05;
            3; Conservative 0; Mismatches
                                                 0; Indels
                                                                 0; Gaps
                                                                              0;
            2 SRL 4
Qу
              | | | |
Db
            2 SRL 4
RESULT 10
ABG63387
    ABG63387 standard; Protein; 5 AA.
XX
AC
    ABG63387;
XX
DT
     27-AUG-2002 (first entry)
XX
DE
    Human albumin fusion protein #62.
XX
KW
    Albumin fusion protein; therapeutic protein X; human albumin; HA;
KW
    human serum albumin; HSA; cancer; reproductive disorder;
     digestive disorder; immune disorder; endocrine disorder;
KW
KW
    haematopoietic disorder; neural disorder; connective disorder;
KW
     cytostatic; antiinfertility; antiinflammatory; antiulcer;
KW
     immunomodulator; anti-HIV; antidiabetic; haemostatic; nootropic;
KW
     neuroprotective; antiparkinsonian; antimicrobial; neuroleptic;
KW
    osteopathic; antiarthritic.
XX
OS
    Homo sapiens.
OS
    Synthetic.
XX
PN
    WO200177137-A1.
XX
PD
    18-OCT-2001.
XX
```

```
PF
     12-APR-2001; 2001WO-US11988.
XX
PR
     12-APR-2000; 2000US-229358P.
PR
     25-APR-2000; 2000US-199384P.
     21-DEC-2000; 2000US-256931P.
PR
XX
     (HUMA-) HUMAN GENOME SCI INC.
PΑ
XX
PΙ
     Rosen CA, Haseltine WA;
XX
DR
     WPI; 2002-010886/01.
XX
РΤ
     New fusion protein for treating disease e.g. diabetes comprises an
PT
     albumin fused to a therapeutic protein -
XX
PS
     Claim 1; Page 628; 2102pp; English.
XX
CC
     The present invention relates to albumin fusion proteins comprising a
CC
     therapeutic protein X and human albumin (HA, also known as human serum
CC
     albumin, HSA). The proteins are useful for treating a disease or
CC
     disorder that may be modulated by therapeutic protein X. The albumin
CC
     extends the shelf-life of protein X, and may increase its biological
CC
     in vitro/in vivo activity. The protein is useful for treating and
CC
     diagnosing disorders such as cancer, reproductive disorders, digestive
CC
     disorders (e.g. Crohn's disease, ulcerative colitis), immune disorders
CC
     (e.g. acquired immunodeficiency syndrome, AIDS), endocrine disorders
CC
     (e.g. diabetes), haematopoietic disorders, neural disorders
CC
     (e.g. Alzheimer's, Parkinson's, Creutzfeldt-Jacob disease,
CC
     encephalomyelitis, meningitis, schizophrenia), and connective disorders
CÇ
     (e.g. osteoporosis, arthritis). ABG63326-ABG65518 represent albumin
CC
     fusion proteins of the invention.
XX
SO
     Sequence
                5 AA;
  Query Match
                          60.0%; Score 3; DB 23; Length 5;
  Best Local Similarity
                          100.0%; Pred. No. 9.3e+05;
            3; Conservative 0; Mismatches
                                                 0; Indels
                                                                 0; Gaps
                                                                             0;
            2 SRL 4
Qу
            2 SRL 4
RESULT 11
ABG63388
ΤD
     ABG63388 standard; Protein; 5 AA.
XX
AC
     ABG63388;
XX
DΤ
     27-AUG-2002 (first entry)
XX
DE
     Human albumin fusion protein #63.
XX
KW
     Albumin fusion protein; therapeutic protein X; human albumin; HA;
KW
     human serum albumin; HSA; cancer; reproductive disorder;
KW
     digestive disorder; immune disorder; endocrine disorder;
KW
     haematopoietic disorder; neural disorder; connective disorder;
```

```
KW
    cytostatic; antiinfertility; antiinflammatory; antiulcer;
KW
     immunomodulator; anti-HIV; antidiabetic; haemostatic; nootropic;
KW
    neuroprotective; antiparkinsonian; antimicrobial; neuroleptic;
KW
    osteopathic; antiarthritic.
XX
OS
    Homo sapiens.
OS
    Synthetic.
XX
PN
    WO200177137-A1.
XX
PD
    18-OCT-2001.
XX
PF
    12-APR-2001; 2001WO-US11988.
XX
    12-APR-2000; 2000US-229358P.
PR
PR
    25-APR-2000; 2000US-199384P.
    21-DEC-2000; 2000US-256931P.
PR
XX
     (HUMA-) HUMAN GENOME SCI INC.
PA
XX
PΙ
    Rosen CA, Haseltine WA;
XX
DR
    WPI; 2002-010886/01.
XX
РT
    New fusion protein for treating disease e.g. diabetes comprises an
PΤ
    albumin fused to a therapeutic protein -
XX
PS
     Claim 1; Page 628; 2102pp; English.
XX
     The present invention relates to albumin fusion proteins comprising a
CC
CC
     therapeutic protein X and human albumin (HA, also known as human serum
CC
     albumin, HSA). The proteins are useful for treating a disease or
CC
     disorder that may be modulated by therapeutic protein X. The albumin
CC
     extends the shelf-life of protein X, and may increase its biological
     in vitro/in vivo activity. The protein is useful for treating and
CC
CC
     diagnosing disorders such as cancer, reproductive disorders, digestive
CC
     disorders (e.g. Crohn's disease, ulcerative colitis), immune disorders
CC
     (e.g. acquired immunodeficiency syndrome, AIDS), endocrine disorders
CC
     (e.g. diabetes), haematopoietic disorders, neural disorders
     (e.g. Alzheimer's, Parkinson's, Creutzfeldt-Jacob disease,
CC
     encephalomyelitis, meningitis, schizophrenia), and connective disorders
CC
     (e.g. osteoporosis, arthritis). ABG63326-ABG65518 represent albumin
CC
CC
     fusion proteins of the invention.
XX
SO
    Sequence 5 AA;
  Query Match
                          60.0%; Score 3; DB 23; Length 5;
  Best Local Similarity
                          100.0%; Pred. No. 9.3e+05;
  Matches
          3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
            2 SRL 4
QУ
              2 SRL 4
Db
```

```
ID
     ABB94397 standard; Peptide; 5 AA.
XX
AC
     ABB94397;
XX
DT
     12-JUN-2002 (first entry)
XX
DE
     Ubiquitin binding monobody 411 BC loop.
XX
KW
     Fibronectin type 3; mutant; stabilising mutation; Fn3; antibody;
KW
     binding protein.
XX
     Unidentified.
OS
XX
ΡN
     WO200204523-A2.
XX
PD
     17-JAN-2002.
XX
PF
     11-JUL-2001; 2001WO-US21855.
XX
PR
     11-JUL-2000; 2000US-217474P.
XX
PA
     (RESE ) RESEARCH CORP TECHNOLOGIES INC.
PΑ
     (KOID/) KOIDE S.
XX
PΙ
     Koide S;
ХX
DR
     WPI; 2002-171708/22.
XX
PT
     New fibronectin type III molecule comprising a stabilizing mutation,
PT
     useful for introducing more mutations for better functions, and in a
PT
     wider range of applications
XX
PS
     Example 10; Page 139; 164pp; English.
XX
CC
     The present invention relates to fibronectin type III (Fn3) molecules
CC
     comprising a stabilising mutation as compared to a wild-type Fn3. Fn3 can
CC
     be used as a scaffold to engineer artificial binding proteins.
CC
     Modifications of the Fn3 scaffold that increase its stability are useful
CC
     in that they allow the introduction of more mutations for better
     functions, and that these make it possible to use Fn3-based engineered
CC
     proteins in a wider range of applications. The present sequence is a
CC
CC
    peptide described in the exemplification of the invention.
XX
SQ
     Sequence
                5 AA;
  Query Match
                          60.0%; Score 3; DB 23; Length 5;
  Best Local Similarity
                          100.0%; Pred. No. 9.3e+05;
            3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
QУ
            2 SRL 4
              Db
            1 SRL 3
RESULT 13
ABB94451
    ABB94451 standard; Peptide; 5 AA.
```

```
XX
AC
     ABB94451;
XX
DT
     12-JUN-2002 (first entry)
XX
DE
     Ubiquitin binding fibronectin 3 mutant BC loop SEQ ID NO: 98.
XX
KW
     Fibronectin type 3; mutant; stabilising mutation; Fn3; antibody;
KW
     binding protein.
XX
OS
     Unidentified.
OS
     Synthetic.
XX
PN
     WO200204523-A2.
XX
PD
     17-JAN-2002.
XX
ΡF
     11-JUL-2001; 2001WO-US21855.
XX
PR
     11-JUL-2000; 2000US-217474P.
XX
PΑ
     (RESE ) RESEARCH CORP TECHNOLOGIES INC.
     (KOID/) KOIDE S.
PΑ
XX
PΙ
     Koide S;
XX
DR
     WPI; 2002-171708/22.
XX
PΤ
     New fibronectin type III molecule comprising a stabilizing mutation,
PТ
     useful for introducing more mutations for better functions, and in a
PT
     wider range of applications
XX
PS
     Example 16; Page 156; 164pp; English.
XX
CC
     The present invention relates to fibronectin type III (Fn3) molecules
CC
     comprising a stabilising mutation as compared to a wild-type Fn3. Fn3 can
CC
     be used as a scaffold to engineer artificial binding proteins.
CC
     Modifications of the Fn3 scaffold that increase its stability are useful
CC
     in that they allow the introduction of more mutations for better
CC
     functions, and that these make it possible to use Fn3-based engineered
CC
     proteins in a wider range of applications. The present sequence is a
CC
     peptide described in the exemplification of the invention.
XX
SQ
     Sequence
                5 AA;
  Query Match
                          60.0%; Score 3; DB 23; Length 5;
  Best Local Similarity
                          100.0%; Pred. No. 9.3e+05;
  Matches
            3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                              0;
            2 SRL 4
QУ
              +111
Db
            1 SRL 3
RESULT 14
AAE19260
```

ID AAE19260 standard; peptide; 5 AA.

```
XX
AC
    AAE19260:
XX
DT
    21-MAY-2002 (first entry)
XX
DE
    Human recombinant alpha-galactosidase A modified peptide, rGal-25.
XX
KW
    Glucocerebrosidase; alpha-galactosidase; Tay-Sachs disease; plant;
KW
     enzyme replacement therapy; Niemann-Pick disease; Gaucher disease;
KW
     Fabry disease; lysosomal storage disease; human.
XX
OS
    Homo sapiens.
OS
    Synthetic.
XX
PN
    WO200208404-A2.
XX
PD
    31-JAN-2002.
XX
PF
    26-JUL-2001; 2001WO-US24111.
XX
PR
    26-JUL-2000; 2000US-0626127.
XX
PA
     (LARG-) LARGE SCALE BIOLOGY CORP.
XX
PΙ
    Garger SJ, Turpen TH, Kumagai MH;
XX
DR
    WPI; 2002-195873/25.
XX
PΤ
    New glucocerebrosidase and alpha-qalactosidase having a
    post-translational modification, useful in enzyme replacement therapy
PT
PΤ
     for treating lysosomal storage diseases, e.g. Gaucher disease,
PT
    Niemann-Pick disease, Fabry disease
XX
PS
    Example 11; Fig 5; 102pp; English.
XX
CC
    The invention relates to production of lysosomal enzymes in plants
    by transient expression. The invention particularly relates to
CC
CC
    glucocerebrosidase and alpha-galactosidase having a post-translational
CC
    modification. The enzymes are useful in enzyme replacement therapy for
CC
    treating lysosomal storage diseases (e.g. Gaucher disease, Niemann-Pick
CC
    disease, Fabry disease and Tay-Sachs disease), in researches for
CC
    developing new approaches to medical treatment of lysosomal storage
CC
    diseases and in industrial processes involving enzymatic substrate
CC
    hydrolysis. The present sequence is human recombinant alpha-
    galactosidase-A C-terminal modified peptide.
CC
XX
SO
    Sequence
               5 AA;
 Query Match
                          60.0%; Score 3; DB 23; Length 5;
                          100.0%; Pred. No. 9.3e+05;
 Best Local Similarity
 Matches
            3; Conservative 0; Mismatches
                                                0; Indels
                                                                 0; Gaps
                                                                             0;
           2 SRL 4
Qу
              Db
           2 SRL 4
```

```
RESULT 15
ABP55341
ID
     ABP55341 standard; Peptide; 5 AA.
XX
AC
     ABP55341;
XX
DT
     29-JAN-2003 (first entry)
XX
DE
     Cucurbita sp. peptide ELSRL SEQ ID NO:18.
ХХ
KW
     Aeromonas caviae; phaC; fusion gene; copolyester; fatty acid;
KW
     peroxisomal targeting signal sequence; peroxisome; thermoplastic;
KW
     genetically-modified plant; elastic; rubbery; multi-branched plastic;
KW
     biodegradable plastic; polyester; thermoplasticity; intrinsic elasticity;
KW
     biodegradability.
XX
OS
     Cucurbita sp.
XX
PN
     WO200272837-A1.
XX
PD
     19-SEP-2002.
XX
PF
     14-MAR-2002; 2002WO-JP02424.
XX
PR
     14-MAR-2001; 2001JP-0072963.
XX
PΑ
     (RIKE ) RIKEN KK.
XX
PΙ
     Nakashita H, Yamaquchi I, Doi Y, Suzuki Y, Kobayashi Y, Shimizu T;
XX
DR
     WPI: 2003-046739/04.
XX
PΤ
     Fusion gene-transferred plants synthesizing copolymers from short-chain
PT
     fatty acid-derived monomers, applicable in producing thermoplastic,
PΤ
     elastic, rubbery, multi-branched and biodegradable plastics -
XX
PS
     Disclosure; Page 9; 56pp; Japanese.
XX
CC
     The present invention describes a fusion gene which is made by ligating a
CC
     gene encoding an enzyme for the synthesis of a copolyester from a monomer
CC
     derived from a 4-7C fatty acid with a gene encoding a peroxisomal
CC
     targeting signal sequence. Also described: (i) recombinant vector
CC
     containing any of the fusion genes; (ii) transformant containing the
CC
     recombinant vector; (iii) transformant plant which is obtained by
CC
     transferring the fusion gene and can express such fusion gene to give a
CC
     copolyester-synthesizing enzyme localized at the peroxisome; and
CC
     (iv) producing the polyester by culturing the transformant before
CC
     collecting such polyester from the culture medium or cultivated
CC
     material. The genetically-modified plants are applicable in producing
CC
     thermoplastic, elastic, rubbery, multi-branched and biodegradable
CC
     plastics. These transformant plants can produce polyesters with
CC
     thermoplasticity, intrinsic elasticity and biodegradability cheaply in
CC
     large quantities, without requiring petroleum resources. The present
CC
     sequence represents a peptide given in the exemplification of the present
CC
     invention.
ХX
SQ
     Sequence
                5 AA;
```

```
Query Match
                          60.0%; Score 3; DB 24; Length 5;
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
                                                0; Indels 0; Gaps
  Matches
          3; Conservative 0; Mismatches
                                                                             0;
           2 SRL 4
Qу
              Db
            3 SRL 5
RESULT 16
AAY16474
     AAY16474 standard; peptide; 6 AA.
ID
XX
AC
    AAY16474;
XX
DT
    06-AUG-1999 (first entry)
XX
DE
     Cyclic thrombin receptor peptide analogue.
XX
KW
     Peptide analogue; N-terminal domain; cancer; angiogenesis; metastasis;
     human G protein linked thrombin receptor; cyclic; antagonist; agonist;
KW
KW
     cardiovascular disease; inflammatory disease; gastrointestinal disease;
     osteoporosis; tissue injury; tissue repair; nerve regeneration;
KW
KW
     thrombin-mimetic study; platelet function; myocardial infarction;
     arterial plaque formation.
KW
XX
OS
     Synthetic.
XX
FH
     Key
                     Location/Qualifiers
FT
     Misc-difference 6
FT
                     /label= Acp
FT
                     /note= "6-amino caprionic acid"
XX
PN
    US5516889-A.
XX
PD
    14-MAY-1996.
XX
PF
     17-MAR-1995; 95US-0405933.
XX
PR
     21-JUN-1993; 93US-0080643.
PR
     17-MAR-1995; 95US-0405933.
XX
PA
     (UYTE-) UNIV TECHNOLOGIES INT INC.
XX
ΡI
    Hollenberg MD, Matsoukas JM, Moore GJ;
XX
DR
    WPI; 1996-251084/25.
XX
РΤ
     New cyclic peptide(s) derived from the protein G linked thrombin
PΤ
     receptor - are agonists or antagonists for treating diseases
PΤ
     involving this receptor, e.g. myocardial infarction
XX
PS
    Disclosure; Column 35; 36pp; English.
XX
CC
    AAY16465-98 represent peptide analogues of the N-terminal domain of
CC
     the human G protein linked thrombin receptor sequence. The peptides,
```

```
CC
     which may be cyclic, have the formula X1-Psi-X2-X3-Omega-X4 in which
CC
     Psi = any (non-)natural aromatic amino acid (aa); Omega = any
CC
     (non-)natural basic aa or derivatives; X1 is absent or is a natural
CC
     aa, 1-3C acyl or 1-5C alkyl; X2 = any natural aa; X3 is absent or is
     any natural aa; and X4 is absent or is any natural aa. The peptides
CC
CC
     are are antagonists and agonists for treating disorders involving
CC
     thrombin receptors, e.g. cardiovascular, inflammatory or
CC
     gastrointestinal diseases; osteoporosis; tissue injury and repair
CC
     (including nerve regeneration); and cancer (by inhibiting angiogenesis
CC
     and metastasis). They may also be used diagnostically and in
CC
     thrombin-mimetic studies. The peptide analogues are particularly used to
CC
     modulate platelet function (acting synergistically with aspirin-type
CC
     compounds) and so are useful in cases of myocardial infarction, as well
CC
     as to coat prostheses and to reduce arterial plaque formation.
XX
SO
     Sequence
                6 AA;
  Query Match
                          60.0%; Score 3; DB 17; Length 6;
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
  Matches
                               0; Mismatches 0; Indels 0; Gaps
            3; Conservative
                                                                             0;
            2 SRL 4
Qу
              | | | |
Db
           1 SRL 3
RESULT 17
AAW26814
ΙD
    AAW26814 standard; peptide; 6 AA.
XX
AC
    AAW26814;
XX
DΤ
     04-NOV-1997 (first entry)
XX
DE
    Hexapeptide epitope sequence 10 from hepatitis C virus C33 antigen.
ХΧ
KW
     HCV; infection; diagnosis; anti-C33 antibody; immunoassay;
KW
     competitive assay; vaccine; non-A, non-B hepatitis;
KW
     non structural protein; NS3.
XX
OS
     Hepatitis C virus.
XX
PN
     EP755943-A1.
XX
PD
     29-JAN-1997.
XX
ΡF
     25-JUL-1996;
                   96EP-0401661.
XX
PR
     25-JUL-1995:
                   95FR-0009005.
ХХ
PA
     (INMR ) BIO MERIEUX.
XX
PΙ
    Jolivet-Reynaud C;
XX
DR
    WPI; 1997-101805/10.
XX
PT
     Polypeptide reacting with antibodies against C33 antigen of
```

```
PΤ
     hepatitis C virus - useful for diagnosis and in vaccines, also
PΤ
     related nucleic acid, vectors and transformed cells
XX
PS
     Claim 2; Page 13; 29pp; French.
XX
CC
     The present sequence is that of a preferred polypeptide that reacts
CC
     specifically with antibody against the C33 antigen of the hepatitis
CC
     C virus (HCV) NS3 protein. The polypeptides have at least 5 amino
     acids and comprise all or part of the sequence:
CC
CC
     Asp-Gly-Ala-Lys-Phe-Ser-Ser-Arg-Leu-Gly-Ala-Ala-Gly-Ala, or
     a sequence derived from it. The synthetic polypeptides can be used
CC
CC
     as replacements for the native antigen, e.g. to detect HCV
CC
     infection and as the active component in vaccines. They are also
CC
     useful to detect, separate, purify and/or quantify anti-C33 antibody
CC
     or the C33 antigen.
XX
SO
     Sequence
                6 AA;
  Query Match
                          60.0%; Score 3; DB 18; Length 6;
  Best Local Similarity
                          100.0%; Pred. No. 9.3e+05;
            3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                              0;
Qу
            2 SRL 4
              \|\cdot\|
Db
            4 SRL 6
RESULT 18
AAY20645
     AAY20645 standard; Protein; 6 AA.
ХX
AC
    AAY20645;
XX
DT
     22-JUL-1999 (first entry)
ХX
DE
     Human neurofilament-L wild type protein fragment 35.
XX
KW
     Human; beta-amyloid precursor protein; beta-APP; diagnosis; cancer;
KW
     frameshift mutation; age-related disease; neurodegenerative disorder;
KW
     Alzheimer's disease; Down's syndrome; myotonic dystrophy; neuronal;
KW
     Huntington's disease; multiple sclerosis; alcoholic liver disease;
KW
     diabetes mellitus type II; microtubule associated protein; Tau; Big Tau;
KW
     ubiquitin B; apolipoprotein E; MAP2; neurofilament-L; neurofilament-M;
KW
     neurofilament-F; presenilin I; presenilin II; cellular tumour antigen;
     glial fibrillary acidic protein; GFAP; p53; semaphorin III; HUPF-1;
KW
KW
     bcl-2; B-cell leukemia/lymphoma 2 proto-oncogene; HMGP-C; NSP-A;
KW
     high mobility group protein-C; neuroendocrine specific protein A.
XX
OS
     Homo sapiens.
XX
PΝ
     W09845322-A2.
XX
PD
     15-OCT-1998.
XX
PF
     02-APR-1998;
                   98WO-IB00705.
XX
     10-APR-1997; 97US-0043163.
PR
```

```
XX
PΑ
     (UYUT-) RIJKSUNIV UTRECHT.
PΑ
     (ROYA-) ROYAL NETHERLANDS ACAD ARTS & SCI.
PΑ
     (UYRO-) UNIV ROTTERDAM ERASMUS.
XX
PΙ
     Burbach JPH, Grosveld FG, Van Leeuwen FW;
XX
DR
     WPI; 1998-609901/51.
DR
     N-PSDB; AAX75758.
XX
РΤ
     Diagnosing disease by detecting frameshift mutations in RNA or
     corresponding protein mutations - used to diagnose cancer and
PΤ
PT
     neurological diseases, particularly Alzheimer's disease, and also
PT
     for treatment and prevention with specific ribozymes or wild-type
PT
     RNA
XX
PS
     Disclosure; Figure 7; 258pp; English.
XX
CC
     This invention describes a novel method for the diagnosis of a disease
CC
     caused by, or associated with, an RNA molecule that has a frameshift
CC
     mutation. The method is used to diagnose age-related diseases, especially
CC
     cancer and a wide range of neurodegenerative disorders (e.g. Alzheimer's
     disease, Down's syndrome, myotonic dystrophy, Huntington's disease,
CC
CC
     multiple sclerosis, alcoholic liver disease, diabetes mellitus type II
CC
     and many others listed) or susceptibility to these disorders. The method
CC
     allows a definitive diagnosis of Alzheimer's disease in living patients,
CC
     at an early stage. It is based on the observation that disease may be
CC
     caused by mutations in RNA rather than DNA. The invention describes the
CC
     used of neuronal system RNA molecules, specifically proteins including
CC
     beta-amyloid precursor protein (beta-APP), the microtubule associated
CC
     proteins Tau and Big Tau, ubiquitin B, apolipoprotein E, microtubule
     associated protein 2 (MAP2), neurofilament-L, neurofilament-M,
CC
CC
     neurofilament-F, presenilin I, presenilin II, glial fibrillary acidic
CC
     protein (GFAP), the cellular tumour antigen p53, B-cell leukemia/lymphoma
CC
     2 (bcl-2) proto-oncogene, semaphorin III, HUPF-1, high mobility group
CC
     protein-C (HMGP-C) and neuroendocrine specific protein A.
XX
SO
     Sequence
                6 AA;
  Query Match
                          60.0%; Score 3; DB 19; Length 6;
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
            3; Conservative 0; Mismatches
                                                0; Indels
            2 SRL 4
Qу
              111
Db
            2 SRL 4
RESULT 19
AAW75318
ID
   AAW75318 standard; peptide; 6 AA.
XX
AC
    AAW75318;
XX
DT
    25-MAR-2003 (updated)
DT
    02-FEB-1999 (first entry)
XX
```

```
DE
     Hexapeptide #11 binds immobilised anti-Ad5 fibre head MAb 1D6.3.
XX
KW
     Cellular receptor; virus; immobilisation; monoclonal antibody; fibre:
KW
     viral surface protein; hexapeptide expression library; adenovirus:
     major histocompatibility complex; MHC; fibronectin; gene therapy;
KW
KW
     genetic disease; acquired immune deficiency syndrome; AIDS; cancer.
XX
0S
     Synthetic.
XX
PN
     FR2758885-A1.
XX
PD
     31-JUL-1998.
XX
PF
     10-JUL-1997;
                   97FR-0008796.
XX
PR
     30-JAN-1997;
                  97FR-0001005.
PR
     10-JUL-1997;
                  97FR-0008796.
XX
     (CNRS ) CNRS CENT NAT RECH SCI.
PA
XX
PΙ
     Boulanger P, Hong SS, Karayan L;
XX
DR
     WPI; 1998-416493/36.
XX
РΤ
     Selection and identification of cellular receptors for viruses -
PT
     used to control attachment and entry of adenovirus into cells, e.g.
PΤ
     for treating infection or in gene therapy
XX
PS
     Example 3; Fig 2(c); 43pp; French.
XX
CC
     The invention relates to methods for selecting and identifying a
CC
     cellular receptor for a virus, by immobilising, on a support, a
CC
     monoclonal antibody targeted to a viral surface protein that determines
CC
     attachment of the virus to the receptor. The immobilised antibody is
CC
     incubated with a hexapeptide expression library and peptides bound to the
CC
     immobilised antibody are eluted by competitive binding with recombinant
CC
     fragments of the viral surface protein. In a reverse method, the viral
     surface protein is immobilised and incubated with the peptide library. In
CC
CC
     this case, the bound peptides are eluted by competitive binding with the
CC
     monoclonal antibody. The hexapeptides AAW75308-W75322 represent
CC
     peptides isolated by biopanning the library with an immobilised
CC
     adenovirus type 5 fibre head protein and eluted using a monoclonal
CC
     antibody (MAb) 1D6.3. The methods are used to identify peptides from MHC
CC
     Class I and/or type III fibronectin proteins that allow or facilitate
CC
     attachment by adenovirus (Ad) to host cells and/or entry into the cells,
CC
     and to identify ligands that modulate Ad infection mediated by these
CC
     peptides, e.g. to treat or prevent Ad infections or to facilitate
CC
     infection by Ad gene therapy vectors used to treat genetic diseases,
CC
     acquired immune deficiency syndrome or cancer.
CC
     (Updated on 25-MAR-2003 to correct PF field.)
XX
     Sequence 6 AA;
SO
  Query Match
                          60.0%; Score 3; DB 19; Length 6;
 Best Local Similarity 100.0%; Pred. No. 9.3e+05;
          3; Conservative 0; Mismatches
                                                0; Indels
                                                                 0; Gaps
                                                                             0;
```

```
Qу
            2 SRL 4
              Db
            1 SRL 3
RESULT 20
AAW75386
     AAW75386 standard; peptide; 6 AA.
XX
AC
     AAW75386;
XX
DT
     02-FEB-1999 (first entry)
XX
DE
     Hexapeptide #11 binds immobilised anti-Ad5 fibre head MAb 1D6.3.
XX
KW
     Cellular receptor; virus; immobilisation; monoclonal antibody; fibre;
     viral surface protein; hexapeptide expression library; adenovirus;
KW
KW
     major histocompatibility complex; MHC; fibronectin; gene therapy;
     genetic disease; acquired immune deficiency syndrome; AIDS; cancer.
KW
XX
OS
     Synthetic.
XX
PN
     FR2758821-A1.
XX
PD
     31-JUL-1998.
XX
PF
     30-JAN-1997;
                   97FR-0001005.
XX
PR
     30-JAN-1997;
                  97FR-0001005.
PR
     09-SEP-1997; 97FR-0011166.
XX
     (CNRS ) CNRS CENT NAT RECH SCI.
PΑ
XX
ΡI
     Boulanger P, Hong SS, Karayan L;
XX
DR
     WPI; 1998-416458/36.
ХX
РТ
     Use of peptide(s) for facilitating or modulating attachment of
PT
     adenovirus to cells - useful for, e.g. treating or preventing
PΤ
     infection and improving uptake of gene therapy vectors
XX
PS
     Example 3; Fig 2(c); 48pp; French.
XX
CC
     The invention relates to methods for selecting and identifying a
CC
     cellular receptor for a virus, by immobilising, on a support, a
CC
     monoclonal antibody targeted to a viral surface protein that determines
CC
     attachment of the virus to the receptor. The immobilised antibody is
CC
     incubated with a hexapeptide expression library and peptides bound to the
CC
     immobilised antibody are eluted by competitive binding with recombinant
CC
     fragments of the viral surface protein. In a reverse method, the viral
CC
     surface protein is immobilised and incubated with the peptide library. In
CC
     this case, the bound peptides are eluted by competitive binding with the
     monoclonal antibody. The hexapeptides AAW75376-W75390 represent
CC
CC
     peptides isolated by biopanning the library with an immobilised
     adenovirus type 5 fibre head protein and eluted using a monoclonal
CC
CC
     antibody (MAb) 1D6.3. The methods are used to identify peptides from MHC
```

Class I and/or type III fibronectin proteins that allow or facilitate

CC

```
CC
     attachment by adenovirus (Ad) to host cells and/or entry into the cells,
CC
     and to identify ligands that modulate Ad infection mediated by these
CC
     peptides, e.g. to treat or prevent Ad infections or to facilitate
CC
     infection by Ad gene therapy vectors used to treat genetic diseases,
CC
     acquired immune deficiency syndrome or cancer.
XX
SO
     Sequence
                6 AA;
  Query Match
                          60.0%; Score 3; DB 19; Length 6;
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
  Matches
            3; Conservative 0; Mismatches
                                                   0; Indels 0; Gaps
                                                                             0;
            2 SRL 4
Qу
              Dh
            1 SRL 3
RESULT 21
AAY55284
ID
     AAY55284 standard; peptide; 6 AA.
XX
AC
     AAY55284;
XX
DT
     07-JAN-2000 (first entry)
XX
     ATCC HB 11885 monoclonal antibody 9079 releasing peptide SEQ ID NO:178.
DE
XX
KW
     Antibody releasing peptide; CD34; hybridoma; binding; antigen;
KW
     cell surface antigen; identification; haematopoietic stem cell;
KW
     tumour; cancer; immune system; therapy; displacement.
XX
OS
     Synthetic.
OS
     Homo sapiens.
XX
PN
     US5968753-A.
XX
ΡD
     19-OCT-1999.
XX
PF
     07-JUN-1995;
                   95US-0482228.
XX
PR
     14-JUN-1994;
                    94US-0259427.
XX
PA
     (NEXE-) NEXELL THERAPEUTICS INC.
XX
     Guillermo R, Helgerson SL, Deans RJ, Tseng-Law J, Kobori JA;
PΙ
PΙ
    Al-Abdaly FA;
XX
    WPI; 1999-590399/50.
DR
XX
PТ
     Short peptides useful for displacing antibodies from cell surface
PT
    antigens. -
XX
PS
     Example 9; Column 33; 81pp; English.
XX
     The present invention describes peptides of 4-17 amino acids which
CC
CC
    displace either the anti-CD34 monoclonal antibody designated 561, the
CC
    anti-CD34 mouse monoclonal antibody produced by the hybridoma ATCC
```

```
CC
     HB-11646 (designated 9069), the anti-CD34 antibody produced by
CC
     hybridoma ATCC HB-11885 (9079), or the anti-human breast cancer
CC
     antibody produced by hybridoma ATCC HB-11884 (9187), from a cell
CC
     surface antigen on a target cell. The peptides are useful for
CC
     displacing antibodies bound to cell surfaces to release cells that
CC
     have been positively selected by antibody-mediated binding to beads
CC
     or other solid support. AAY55107 to AAY55319 represent peptides used in
CC
     the exemplification of the present invention.
XX
SO
     Sequence 6 AA;
  Query Match
                          60.0%; Score 3; DB 20; Length 6;
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
 Matches
            3; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
                                                                              0;
            2 SRL 4
Qу
              \parallel \parallel \parallel
Db
            2 SRL 4
RESULT 22
AAY87030
    AAY87030 standard; Peptide; 6 AA.
XX
AC
    AAY87030;
XX
DТ
     09-MAY-2000 (first entry)
XX
DE
     Human haematopoietic CD34+ cell binding peptide SEQ ID #178.
XX
KW
     Human; haematopoietic CD34+ cell; binding peptide; monoclonal antibody;
KW
     non-enzymatic cell selection method; haematopoietic stem cell;
KW
     haematopoietic progenitor cell; antibody 561; breast cancer cell;
KW
     antibody 9187; cell surface determinant; diagnostic cell based assay.
XX
OS
     Homo sapiens.
XX
PN
    US6017719-A.
XX
PD
     25-JAN-2000.
XX
ΡF
     07-JUN-1995;
                   95US-0482528.
XX
PR
     14-JUN-1994;
                   94US-0259427.
XX
PA
     (NEXE-) NEXELL THERAPEUTICS INC.
XX
PΙ
     Guillermo R, Helgerson SL, Deans RJ, Tseng-Law J, Kobori JA;
PΙ
    Al-Abdaly FA;
XX
DR
    WPI; 2000-136676/12.
XX
PΤ
     Non-enzymatic method for the positive selection of target cells from a
PT
     heterogeneous cell suspension, useful for selecting human breast cancer
PΤ
     cells from a patient's blood or bone marrow -
XX
PS
     Example 9; Column 37; 82pp; English.
```

```
CC
     This sequence represents a human haematopoietic CD34+ cell binding
CC
     peptide, and was used to test the method of the invention. The method is
     a non-enzymatic method for the positive selection of one or more target
CC
CC
     cells from a heterogeneous cell suspension, by using specific peptides
CC
     which effect the displacement and release of a specific target cell
CC
     from a specific monoclonal antibody. The method is useful for positive
CC
     selection and specific release of target human haematopoietic
CC
     stem/progenitor cells bound by the monoclonal anti-CD34 antibodies and
CC
     the antibody 561. The method is also useful for positive selection and
CC
     specific release of target human breast cancer cells, bound by the
CC
     monoclonal anti-breast cancer antibody 9187, from a patient's blood or
CC
     bone marrow. Identification of peptide epitopes for antibodies which
CC
     recognise cell surface determinants also allows construction of
CC
     diagnostic cell based assays. The peptide mediated release is enzyme free
CC
     and thus leaves the cell surface proteins intact. Moreover, peptide
CC
     mediated release leaves the target cell free of bound antibody or
CC
     antibody fragments. The method also produces a high yield of functional
CC
     target cells and is relatively inexpensive to carry out.
XX
SO
     Sequence
                6 AA;
  Query Match
                          60.0%; Score 3; DB 21; Length 6;
  Best Local Similarity
                          100.0%; Pred. No. 9.3e+05;
  Matches
            3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
Qу
            2 SRL 4
              Dh
            2 SRL 4
RESULT 23
AAY43709
     AAY43709 standard; peptide; 6 AA.
XX
AC
    AAY43709;
XX
DT
     11-FEB-2000 (first entry)
ХX
DE
     Sequence of the second loop of an omega conotoxin.
XX
KW
     Omega-conotoxin; venom; predatory marine snail; N-type calcium channel;
     neuronal damage reduction; ischemia; analgesia; opiate analgesia;
KW
KW
     schizophrenia; stimulant induced psychosis; hypertension; inflammation;
KW
     bronchotension; neuropathic pain; voltage sensitive calcium channel.
XX
OS
     Synthetic.
OS
     Conus catus.
XX
PN
    WO9954350-A1.
XX
PD
     28-OCT-1999.
XX
PF
    16-APR-1999;
                   99WO-AU00288.
XX
PR
    16-APR-1998; 98AU-0002989.
PR
     01-FEB-1999; 99AU-0008419.
```

XX

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XX
PΑ
     (UYQU ) UNIV QUEENSLAND.
XX
PΙ
     Drinkwater RD, Lewis RJ, Alewood PF, Nielsen KJ;
XX
DR
     WPI; 2000-013226/01.
XX
PΤ
     Novel peptides used for the treatment of disorders and diseases where
PΤ
     blockage of the N-type calcium channels is required -
XX
PS
     Claim 5; Page 45; 81pp; English.
XX
CC
     The present sequence represents the second loop of an isolated,
CC
     synthetic, or recombinant omega-conotoxin. Omega-conotoxins are
CC
     isolated from venoms of predatory marine snails, and have a
CC
     selectivity for N-type calcium channels over P/Q type channels, and so
CC
     block N-type calcium channels. The omega-conotoxins of the invention
CC
     can be used in any disease or disorder where blockage of N-type calcium
     channels is required, e.g. in the reduction of neuronal damage following
CC
CC
     ischemia, production of analgesia, or enhancement of opiate analgesia,
     in the treatment of schizophrenia, stimulant induced psychoses,
CC
CC
     hypertension, inflammation, and diseases which cause bronchotension,
CC
     and also in the inhibition of progression of neuropathic pain. They can
CC
     also be used in a screen to identify compounds with activity at N-type
CC
     voltage sensitive calcium channels.
XX
SQ
     Sequence
                6 AA;
  Query Match
                          60.0%; Score 3; DB 21; Length 6;
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
            3; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
                                                                             0:
            2 SRL 4
Qу
              111
Db
            1 SRL 3
RESULT 24
AAY43740
ΙD
     AAY43740 standard; peptide; 6 AA.
XX
AC
     AAY43740;
XX
DT
     11-FEB-2000 (first entry)
XX
DE
     Sequence of the second loop of an omega conotoxin.
XX
KW
     Omega-conotoxin; venom; predatory marine snail; N-type calcium channel;
KW
     neuronal damage reduction; ischemia; analgesia; opiate analgesia;
KW
     schizophrenia; stimulant induced psychosis; hypertension; inflammation;
KW
     bronchotension; neuropathic pain; voltage sensitive calcium channel.
XX
OS
     Synthetic.
OS
     Conus sp.
XX
FΗ
     Key
                     Location/Qualifiers
FT
     Modified-site
```

```
FT
                     /label= Nle
FT
                     /note= "norleucine"
XX
ΡN
     WO9954350-A1.
XX
PD
     28-OCT-1999.
XX
PF
     16-APR-1999;
                   99WO-AU00288.
XX
PR
     16-APR-1998;
                  98AU-0002989.
PR
     01-FEB-1999;
                  99AU-0008419.
XX
PA
     (UYQU ) UNIV QUEENSLAND.
XX
PΙ
     Drinkwater RD, Lewis RJ, Alewood PF, Nielsen KJ;
XX
DR
     WPI; 2000-013226/01.
XX
PТ
     Novel peptides used for the treatment of disorders and diseases where
PΤ
     blockage of the N-type calcium channels is required
XX
PS
     Claim 5; Page 45; 81pp; English.
XX
CC
     The present sequence represents the second loop of an isolated,
CC
     synthetic, or recombinant omega-conotoxin. Omega-conotoxins are
CC
     isolated from venoms of predatory marine snails, and have a
CC
     selectivity for N-type calcium channels over P/Q type channels, and so
CC
     block N-type calcium channels. The omega-conotoxins of the invention
CC
     can be used in any disease or disorder where blockage of N-type calcium
CC
     channels is required, e.g. in the reduction of neuronal damage following
CC
     ischemia, production of analgesia, or enhancement of opiate analgesia,
CC
     in the treatment of schizophrenia, stimulant induced psychoses,
CC
     hypertension, inflammation, and diseases which cause bronchotension,
     and also in the inhibition of progression of neuropathic pain. They can
CC
CC
     also be used in a screen to identify compounds with activity at N-type
CC
     voltage sensitive calcium channels.
XX
SO
     Sequence 6 AA;
  Query Match
                          60.0%; Score 3; DB 21; Length 6;
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
  Matches
           3; Conservative 0; Mismatches 0; Indels 0; Gaps
            2 SRL 4
QУ
              | | |
Db
           1 SRL 3
RESULT 25
AAM97492
     AAM97492 standard; Peptide; 6 AA.
ID
XX
AC
     AAM97492;
XX
DT
     24-JAN-2002 (first entry)
ХX
DE
     Human peptide #767 encoded by a SNP oligonucleotide.
```

```
XX
KW
     Immunosuppressive; immunostimulatory; antiinflammatory; cytostatic;
KW
     neuroprotective; antimicrobial; gene therapy; vaccine; amylase; cancer;
     amyloid protein; angiopoietin; apoptosis related protein; cadherin;
KW
KW
     cyclin; polymerase; oncogene; histone; kinase; colony stimulating factor;
KW
     complement related protein; cytochrome; kinesin; cytokine; interferon;
KW
     interleukin; G-protein coupled receptor; thioesterase; inflammation;
KW
     multifactorial disease; autoimmune disease; infection;
KW
     nervous system disease.
XX
OS
     Homo sapiens.
XX
PN
     WO200147944-A2.
XX
     05-JUL-2001.
PD
XX
PF
     28-DEC-2000; 2000WO-US35498.
XX
PR
     28-DEC-1999;
                  99US-0173419.
PR
     27-DEC-2000; 2000US-0173419.
XX
PΑ
     (CURA-) CURAGEN CORP.
XX
PΙ
     Shimkets RA, Leach M;
XX
DR
     WPI; 2001-465210/50.
XX
PΤ
     Polymorphic nucleic acids encoding e.g. amylases, cyclins, polymerases,
PΤ
     oncogenes and histones, useful for diagnosing and treating, e.g.
PT
     cancer, autoimmune diseases and infections -
XX
PS
     Disclosure; Page 3836; 4143pp; English.
XX
CC
     The present invention relates to oligonucleotides (see AAL26793-AAL34659)
CC
     encoding polymorphic variants of proteins related to amylases, amyloid
CC
     proteins, angiopoietin, apoptosis related proteins, cadherin, cyclin,
CC
     polymerase, oncogenes, histones, kinases, colony stimulating factors,
CC
     complement related proteins, cytochromes, kinesins, cytokines,
CC
     interferons, interleukins, G-protein coupled receptors and thioesterases.
CC
     The present sequence is a peptide encoded by one such oligonucleotide.
CC
     The oligonucleotides and the peptides encoded by them may be used in the
CC
     prevention, diagnosis and treatment of diseases associated with
CC
     inappropriate expression of the proteins listed above. Disorders that may
CC
     be prevented, diagnosed and/or treated include multifactorial diseases
CC
     with a genetic component, such as autoimmune diseases (e.g. rheumatoid
CC
     arthritis, multiple sclerosis, diabetes, systemic lupus erythromatosus
     and Grave's disease), inflammation, cancer (e.g. cancers of the bladder,
CC
    brain, breast, colon and kidney, leukaemia), diseases of the nervous
CC
CC
     system and an infection of pathogenic organisms.
XX
SO
    Sequence
               6 AA;
  Query Match
                          60.0%; Score 3; DB 22; Length 6;
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
 Matches
          3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
```

Qу

```
Db 3 SRL 5
```

```
RESULT 26
AAB49814
TD
     AAB49814 standard; Peptide; 6 AA.
XX
AC
     AAB49814;
ХX
DT
     02-MAR-2001 (first entry)
XX
DE
     Human endostatin peptide fragment SEQ ID NO: 27.
XX
KW
     Endostatin; antiangiogenic; angiogenesis; human; mouse; chicken;
     cancer; inflammation; angiogenesis-dependent disease.
KW
XX
OS
     Homo sapiens.
XX
PN
     WO200067771-A1.
XX
PD
     16-NOV-2000.
XX
PF
     02-MAY-2000; 2000WO-US12063.
XX
PR
     06-MAY-1999;
                    99US-0132907.
PR
     14-JUL-1999;
                    99US-0353333.
XX
PA
     (BURN-) BURNHAM INST.
XX
PΙ
     Vuori K;
XX
DR
     WPI; 2001-040937/05.
XX
PΤ
     Endostatin peptide comprising at least four endostatin amino acid
PT
     residues are e.g. angiogenesis inhibitors for treating cancer and
PT
     diabetic retinopathy -
XX
PS
     Disclosure; Page 127; 146pp; English.
XX
CC
     The present invention provides endostatin peptides which can be used in
     the modulation of angiogenesis. This is useful in the treatment of
CC
CC
     cancers, inflammation, rheumatoid arthritis, chronic articular
CC
     rheumatism, psoriasis, disorders associated with inopportune invasion of
CC
     vessels such as diabetic retinopathy, neovascular glaucoma, retinopathy
CC
     of prematurity, macular degeneration, corneal graft rejection,
CC
     retrolental fibroplasia, rubeosis, capillary proliferation in
CC
     atherosclerotic plaques and osteoporosis. Other angiogenesis-dependent
CC
     diseases include Osler-Webber syndrome, myocardial angiogenesis, plaque
CC
     neovasculisation, telangiectasia, haemophiliac joints and wound
CC
     granulation. In addition, the peptides can be used as birth control
CC
     agents.
XX
SO
     Sequence
                6 AA;
 Query Match
                          60.0%; Score 3; DB 22; Length 6;
```

Best Local Similarity 100.0%; Pred. No. 9.3e+05;

```
Matches 3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                              0;
            2 SRL 4
QУ
              Db
            2 SRL 4
RESULT 27
AAB49815
     AAB49815 standard; Peptide; 6 AA.
XX
AC
     AAB49815;
XX
\mathsf{D}\mathsf{T}
     02-MAR-2001 (first entry)
XX
DE
     Human endostatin peptide fragment SEQ ID NO: 28.
XX
KW
     Endostatin; antiangiogenic; angiogenesis; human; mouse; chicken;
KW
     cancer; inflammation; angiogenesis-dependent disease.
XX
OS
     Homo sapiens.
XX
PN
     WO200067771-A1.
XX
PD
     16-NOV-2000.
ХХ
PF
     02-MAY-2000; 2000WO-US12063.
XX
PR
     06-MAY-1999;
                    99US-0132907.
PR
     14-JUL-1999;
                   99US-0353333.
XX
PA
     (BURN-) BURNHAM INST.
XX
PΙ
     Vuori K;
XX
DR
     WPI; 2001-040937/05.
XX
PT
     Endostatin peptide comprising at least four endostatin amino acid
PT
     residues are e.g. angiogenesis inhibitors for treating cancer and
PT
     diabetic retinopathy -
XX
PS
     Disclosure; Page 127; 146pp; English.
XX
CC
     The present invention provides endostatin peptides which can be used in
CC
     the modulation of angiogenesis. This is useful in the treatment of
CC
     cancers, inflammation, rheumatoid arthritis, chronic articular
CC
     rheumatism, psoriasis, disorders associated with inopportune invasion of
CC
     vessels such as diabetic retinopathy, neovascular glaucoma, retinopathy
CC
     of prematurity, macular degeneration, corneal graft rejection,
CC
     retrolental fibroplasia, rubeosis, capillary proliferation in
CC
     atherosclerotic plaques and osteoporosis. Other angiogenesis-dependent
CC
     diseases include Osler-Webber syndrome, myocardial angiogenesis, plaque
CC
     neovasculisation, telangiectasia, haemophiliac joints and wound
CC
     granulation. In addition, the peptides can be used as birth control
CC
     agents.
XX
SQ
     Sequence
                6 AA;
```

```
Query Match
                          60.0%; Score 3; DB 22; Length 6;
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
                                                 0; Indels 0; Gaps
  Matches
           3; Conservative 0; Mismatches
                                                                             0;
            2 SRL 4
Qу
              Db
            1 SRL 3
RESULT 28
ABG60376
ΤD
     ABG60376 standard; Peptide; 6 AA.
XX
AC
     ABG60376;
XX
DT
     30-JUL-2002 (first entry)
XX
DE
     Selective targeting peptide #51.
XX
KW
     Targeting peptide; cancer; arthritis; diabetes; inflammatory disease;
KW
     atherosclerosis; autoimmune disease; bacterial infection; apoptosis;
KW
     viral infection; cardiovascular disease; degenerative disease; ischaemia;
     inflammation; macular degeneration; antiinflammatory; antidiabetic;
KW
KW
     cardiovascular; immunomodulator; antibacterial; antiviral; cytostatic;
KW
     gene therapy.
XX
OS
     Synthetic.
XX
PN
    WO200220769-A1.
XX
PD
    14-MAR-2002.
XX
PF
     07-SEP-2001; 2001WO-US27692.
XX
PR
     08-SEP-2000; 2000US-231266P.
PR
     17-JAN-2001; 2001US-0765101.
XX
PA
     (TEXA ) UNIV TEXAS SYSTEM.
XX
PΙ
    Arap W, Pasqualini R;
XX
DR
    WPI; 2002-415731/44.
XX
PΤ
     Targeting peptides identified by phage display, useful for targeting
PT
     delivery to an organ or tissue, particularly for treating a disease,
PT
     e.g. cancer, inflammatory or autoimmune diseases, infections or
    cardiovascular disease -
PΤ
XX
PS
    Claim 22; Page 65; 317pp; English.
XΧ
     The invention relates to an isolated peptide of 100 amino acids or less
CC
CC
     in size useful for targeting delivery to an organ or tissue, particularly
CC
     for treating a disease, e.g. cancer, arthritis, diabetes, inflammatory
CC
     disease, atherosclerosis, autoimmune disease, bacterial infection, viral
CC
     infection, cardiovascular disease or degenerative disease. The peptide is
     also useful for inducing apoptosis, particularly to a subject with
CC
```

```
ischaemia, cancer, arthritis, diabetes, cardiovascular disease,
CC
     inflammation or macular degeneration. Furthermore, the peptide is useful
CC
     for diagnosing the diseases cited above. Targeting peptides of the
     invention can also be used to deliver an agent to a foetus, by attaching
CC
     a peptide to the agent and administering the peptide to a pregnant
CC
     subject. Sequences ABG60326-ABG60574 represent selective targeting
CC
CC
     peptides of the invention.
XX
SQ
     Sequence 6 AA;
  Query Match
                          60.0%; Score 3; DB 23; Length 6;
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
  Matches
           3; Conservative
                              0; Mismatches
                                                 0; Indels
                                                                 0; Gaps
                                                                             0:
            2 SRL 4
QУ
              +
Db
            4 SRL 6
RESULT 29
AAP20402
ID
     AAP20402 standard; Protein; 7 AA.
ХХ
AC
     AAP20402;
XX
DT
     25-MAR-2003 (updated)
DT
     30-NOV-1992 (first entry)
XX
DE
     Secretin precursor formation peptide 4.
XX
KW
     Strong acid; digestive canal hormone; pancreas; qastrin; pepsin;
KW
     insulin.
XX
OS
     Synthetic.
XX
FΗ
     Key
                     Location/Qualifiers
FT
     Modified-site
FΤ
                     /note= "But protected"
FT
     Modified-site
FT
                     /note= "PhSO2 ring substd. by 1, 2 or 3 alkyl or
FT
                             alkoxy gps."
FT
     Modified-site
FT
                     /note= "PhSO2 ring substd. by 1, 2 or 3 alkyl or
FT
                             alkoxy qps."
FT
     Modified-site
FT
                     /note= "OBut protected"
FT
     Modified-site
FT
                     /note= "But protected"
XX
PN
     EP47997-A.
XX
PD
     24-MAR-1982.
XX
PF
     11-SEP-1981;
                   81EP-0107186.
XX
PR
     11-SEP-1980; 80JP-0125262.
XX
```

CC

```
(EISA ) EISAI CO LTD.
PΑ
XX
PΙ
     Uchiyama M, Sato T, Yoshino H, Tsuchiya Y, Konishi M;
     Tsujii M, Hisatake Y, Koiwa A;
PΙ
XX
DR
     WPI; 1982-24409E/13 (24409E).
XX
PΤ
     Heptacosa: peptide(s) - useful for high yield conversion to high
PΤ
     purity secretin on strong acid treatment
XX
PS
     Claim 10; Page 45; 47pp; English.
XX
CC
     The sequence in AAP20398 is a precursor for the production of
CC
     secretin. The peptide sequences given in AAP20399-402 are peptides
CC
     which are useful in the production of this precursor. The precusor is
CC
     treated with strong acid in the preparation of secretin. Secretin is
CC
     one of the digestive canal hormones and is useful in promotion of
     pancreatic external secretin, controlling gastrin-stimulating secretin
CC
CC
     of the stomach acid, releasing insulin, stimulating secretin of pepsin
CC
     and decomposing fat. It is used as a pancreatic-function examining
CC
     agent and a medicine for curing duodenal ulcers etc.
CC
     (Updated on 25-MAR-2003 to correct PA field.)
ХX
SO
     Sequence 7 AA;
 Query Match
                          60.0%; Score 3; DB 3; Length 7;
 Best Local Similarity 100.0%; Pred. No. 9.3e+05;
          3; Conservative 0; Mismatches 0; Indels
                                                               0; Gaps
                                                                            0;
           2 SRL 4
QУ
              1 SRL 3
RESULT 30
AAP30020
ID
    AAP30020 standard; peptide; 7 AA.
XX
AC
    AAP30020;
XX
DT
     25-MAR-2003 (updated)
DT
     03-SEP-1992 (first entry)
XX
DΕ
    Intermediate of secretin synthesis.
XX
KW
     Digestive; hormone; industrial; insulin; gastrin; pancreas; duodenal;
KW
    ulcers.
XX
OS
    Synthetic.
XX
FH
                    Location/Qualifiers
FT
    Modified-site
FT
                     /label = X-Ser-t-Bu
FT
                     /note= "X= H or benzyloxycarbonyl"
FΤ
    Modified-site
FT
                    /label= Arg-Tos
FT
    Modified-site
```

```
FT
                     /label = Arg-Tos
FT
     Modified-site
FT
                     /label= Asp-O-t-Bu
FT
     Modified-site
FT
                     /label= Ser-t-Bu
XX
PN
     JP58152848-A.
XX
PD
     10-SEP-1983.
XX
PF
     05-MAR-1982;
                   82JP-0034029.
XX
PR
     07-SEP-1981;
                  81JP-0140717.
XX
PΑ
     (EISA ) EISAI CO LTD.
XX
     WPI; 1983-791972/42.
DR
XX
     Hepta:peptide(s) useful as intermediates to secretin - a
PT
PT
     digestive tract hormone useful in treating duodenal ulcers
XX
PS
     Claim 1; Page 1; 13pp; Japanese.
XX
CC
     The peptide is an intermediate in the industrial synthesis of
CC
     secretin, a digestive tract hormone. Secretin has various
CC
     pharmaceutical actions such as pancreatic exocrinogenic,
CC
     gastrin stimulating, gastric acid secretion inhibitory,
CC
     insulin releasing, pepsin secretion promoting and adipolytic
     action. It is used as a reagent for study of pancreatic
CC
CC
     function or as a remedy for duodenal ulcers.
CC
     (Updated on 25-MAR-2003 to correct PR field.)
CC
     (Updated on 25-MAR-2003 to correct PA field.)
XX
SO
     Sequence
              7 AA;
  Query Match
                          60.0%; Score 3; DB 4; Length 7;
  Best Local Similarity
                          100.0%; Pred. No. 9.3e+05;
            3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                              0;
            2 SRL 4
Qу
              ] [ ]
Db
            1 SRL 3
RESULT 31
AAW11186
ID
     AAW11186 standard; Peptide; 7 AA.
XX
AC
     AAW11186;
XX
DT
     15-JAN-1998 (first entry)
XX
     Brain homing peptide.
DE
XX
KW
     Brain homing peptide; in vivo panning; screening; phage display;
KW
     drug delivery.
XX
```

```
OS
     Synthetic.
XX
PN
     WO9710507-A1.
XX
PD
     20-MAR-1997.
XX
PF
     10-SEP-1996;
                   96WO-US14600.
XX
PR
     11-SEP-1995;
                   95US-0526710.
PR
     11-SEP-1995;
                    95US-0526708.
XX
PΑ
     (LJOL-) LA JOLLA CANCER RES FOUND.
XX
PΙ
     Pasqualini R. Ruoslahti E:
XX
     WPI; 1997-202359/18.
DR
XX
PΤ
     Obtaining compound that homes to selected organ or tissue - by in
PΤ
     vivo panning method, specifically to identify brain, kidney,
PT
     angiogenic vasculature or tumour tissue homing peptide(s)
XX
PS
     Disclosure; Page 45; 75pp; English.
XX
CC
     This synthetic peptide is an example of a brain-homing peptide
CC
     that was identified using a claimed method for obtaining
CC
     molecules that home to a selected organ or tissue. This in vivo
CC
     panning method typically involves administering a phage display
CC
     library to a subject, and identifying expressed peptides which
CC
     home to the desired organ or tissue, e.g. brain, kidney, angiogenic
     vascular tissue or tumour tissue. The isolated peptides (see
CC
     AAW13412-52, AAW11181-86) can be used to target e.g. drugs, toxins or
CC
CC
     labels to the selected organ/tissue (claimed) or to identify and/or
CC
     isolate target molecules (claimed). The peptides can be directly
     identified in vivo, as compared to prior art in vitro screening
CC
CC
     methods, which require further examination to see if they maintain
CC
     specificity in vivo.
XX
SQ
     Sequence
               7 AA;
  Query Match
                          60.0%; Score 3; DB 18; Length 7;
  Best Local Similarity
                          100.0%; Pred. No. 9.3e+05;
 Matches
           3; Conservative 0; Mismatches
                                                0; Indels 0; Gaps
                                                                             0:
Qу
            2 SRL 4
              111
Db
           3 SRL 5
RESULT 32
AAW27419
ID
    AAW27419 standard; peptide; 7 AA.
XX
AC
    AAW27419;
XX
DT
    19-DEC-1997 (first entry)
XX
DE
     CDR2 from light chain variable region of KM1259 antibody.
```

```
KW
     Complementarity determining region; CDR; light chain; treatment;
KW
    variable region; murine; mouse; human; interleukin 5; IL-5;
KW
     receptor; alpha chain; monoclonal antibody; hybridoma; detection;
KW
    assay; diagnosis; allergic respiratory disease; chronic bronchitis;
XX
OS
    Mus spp.
XX
ΡN
    WO9710354-A1.
XX
PD
    20-MAR-1997.
XX
ΡF
    11-SEP-1996;
                  96WO-JP02588.
XX
PR
    11-SEP-1995:
                  95JP-0232384.
XX
     (KYOW ) KYOWA HAKKO KOGYO KK.
PA
XX
    Anazawa H, Furuya A, Hanai N, Iida A, Koike M;
PΙ
PΙ
    Nakamura K, Takatsu K;
XX
    WPI; 1997-202249/18.
DR
XX
PT
    Antibody against alpha-chain of human interleukin 5 receptor -
PT
    useful for diagnosis and treatment of respiratory allergic diseases,
PΤ
     e.g. chronic bronchitis
XX
PS
    Claim 8; Page 165; 238pp; Japanese.
XX
     The present sequence is complementarity determining region 2 (CDR2)
CC
     from the light chain variable region of the murine anti-human
CC
CC
     interleukin 5 receptor alpha chain (hIL-5R alpha) monoclonal
     antibody (MAb) KM1259. KM1259 is produced by the hybridoma
CC
     FERM BP-5134, which was prepared by immunising Balb/c mice with
CC
    hIL-5R alpha, fusing spleen cells obtained from the mice with mouse
CC
     myeloma P3-U1 cells and screening the resultant hybridomas. The MAb
CC
CC
     can be used to detect or assay for hIL-5R alpha and cells
CC
     expressing it on their surface, especially to diagnose allergic
CC
     respiratory diseases, e.g. chronic bronchitis. It can also be used
CC
     to treat such diseases.
XX
SQ
               7 AA;
     Sequence
                          60.0%; Score 3; DB 18; Length 7;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
            3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                             0;
  Matches
           2 SRL 4
Qу
              3 SRL 5
RESULT 33
AAY48768
    AAY48768 standard; Peptide; 7 AA.
ΙD
XX
AC
   AAY48768;
```

XX

```
XX
DТ
     20-MAR-2003 (updated)
DT
     10-DEC-1999 (first entry)
XX
DE
     Membrane dipeptidase-binding gut homing peptide #13.
XX
KW
     Homing peptide; organ; tissue; lung; pancreas; skin; retina; MDP;
     prostate; ovary; lymph node; adrenal gland; liver; gut; tumour;
KW
KW
     membrane dipeptidase.
XX
OS
     Synthetic.
OS
     Homo sapiens.
XX
PN
    WO9946284-A2.
XX
PD
    16-SEP-1999.
XX
PF
     10-MAR-1999;
                    99WO-US05284.
XX
PR
     13-MAR-1998;
                    98US-0042107.
PR
     26-FEB-1999;
                    99US-0258754.
XX
PΑ
     (BURN-) BURNHAM INST.
XX
PΙ
     Rajotte D, Pasqualini R, Ruoslahti EI;
XX
DR
     WPI; 1999-571717/48.
XX
PT
     New peptides which selectively home to organs or tissues, used for,
PT
     e.q. identifying target ligands and for therapy of pathological
PT
     conditions -
XX
     Example 6; Page 147; 193pp; English.
PS
XX
CC
     The present invention describes peptides that selectively home to a
CC
     tissue or organ. The peptides can be used for identifying an organ
CC
     or tissue, for identifying a target molecule expressed by an organ or
CC
     tissue or for treating an organ or tissue pathology, where the organ or
CC
     tissue is selected from prostate, lung, skin, retina, pancreas, gut,
CC
     ovary, adrenal gland, liver, and lymph node. The peptide bind to the
CC
     membrane dipeptidase (MDP). AAY48618 to AAY49066 represent sequences
CC
     which are used in the exemplification of the present invention.
CC
     (Updated on 20-MAR-2003 to correct PR field.)
XX
SO
     Sequence 7 AA;
 Query Match
                          60.0%; Score 3; DB 20; Length 7;
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
            3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
Qу
            2 SRL 4
Db
            1 SRL 3
```

```
AAY48912 standard; Peptide; 7 AA.
XX
AC
    AAY48912;
XX
DT
     20-MAR-2003 (updated)
DT
     10-DEC-1999 (first entry)
XX
DΕ
    Membrane dipeptidase-binding prostate homing peptide #28.
XX
KW
     Homing peptide; organ; tissue; lung; pancreas; skin; retina; MDP;
KW
     prostate; ovary; lymph node; adrenal gland; liver; gut; tumour;
KW
    membrane dipeptidase.
XX
OS
     Synthetic.
OS
    Homo sapiens.
XX
PN
    W09946284-A2.
XX
PD
    16-SEP-1999.
XX
PF
    10-MAR-1999;
                   99WO-US05284.
XX
PR
    13-MAR-1998;
                  98US-0042107.
PR
     26-FEB-1999;
                   99US-0258754.
XX
PΑ
     (BURN-) BURNHAM INST.
XX
PΙ
     Rajotte D, Pasqualini R, Ruoslahti EI;
XX
DR
    WPI; 1999-571717/48.
XX
PT
    New peptides which selectively home to organs or tissues, used for,
PT
     e.g. identifying target ligands and for therapy of pathological
PΤ
     conditions
ХX
PS
     Example 6; Page 151; 193pp; English.
XX
CC
     The present invention describes peptides that selectively home to a
CC
     tissue or organ. The peptides can be used for identifying an organ
     or tissue, for identifying a target molecule expressed by an organ or
CC
CC
     tissue or for treating an organ or tissue pathology, where the organ or
CC
     tissue is selected from prostate, lung, skin, retina, pancreas, gut,
CC
     ovary, adrenal gland, liver, and lymph node. The peptide bind to the
CC
    membrane dipeptidase (MDP). AAY48618 to AAY49066 represent sequences
CC
    which are used in the exemplification of the present invention.
CC
     (Updated on 20-MAR-2003 to correct PR field.)
XX
SO
    Sequence 7 AA;
 Query Match
                          60.0%; Score 3; DB 20; Length 7;
 Best Local Similarity 100.0%; Pred. No. 9.3e+05;
          3; Conservative 0; Mismatches
                                                0; Indels
                                                                0; Gaps
                                                                            0;
           2 SRL 4
QУ
             Dh
           4 SRL 6
```

```
RESULT 35
AAY16941
ΙD
     AAY16941 standard; peptide; 7 AA.
XX
AC
    AAY16941;
XX
DT
     20-JUL-1999 (first entry)
XX
DE
     Heat shock protein (hsp) binding peptide.
XX
     Conjugate peptide; heat shock protein; hsp; phage display library; virus;
KW
KW
     surface protein; tethering peptide; chaperone process; cytokine; cancer;
KW
     neoplastic disease; infectious disease; bacterium; immune system; funqus;
KW
     acquired immune deficiency; autoimmune disease.
XX
OS
     Synthetic.
XX
     W09922761-A1.
PN
XX
PD
     14-MAY-1999.
XX
PF
     22-OCT-1998;
                   98WO-US22335.
XX
PR
     31-OCT-1997;
                   97US-0961707.
XX
PΑ
     (SLOK ) SLOAN KETTERING INST CANCER RES.
XX
PΙ
     Hartl U, Hoe MH, Houghton A, Mayhew M, Moroi Y;
PΙ
     Ouerfelli O, Rothman JE;
XX
DR
     WPI; 1999-313177/26.
XX
PT
     Identifying peptides which bind heat shock proteins
XX
PS
     Examples; Page 22; 155pp; English.
XX
CC
     The invention relates to conjugate peptides engineered to noncovalently
CC
     bind to heat shock proteins (hsp). A method of identifying a hsp binding
CC
     peptide comprises (a) contacting a phage display library having
CC
     bacteriophage expressing, in a surface protein, inserted peptides with a
CC
     hsp target, and bound to a benzoquinone ansamycin antibiotic (BAA), in a
CC
     physiologic binding buffer; (b) isolating a phage binding to the hsp
CC
     target; and (c) identifying the inserted peptide expressed. The peptides
CC
     which bind to a hsp can be used as tethering peptides for a hsp which may
CC
     serve as an accessory in a chaperone process and/or may comprise a
CC
     cytokine. They can also be coupled to antigens to induce an immune
CC
     response. Such compositions can be used for treating neoplastic disease,
CC
     e.g. cancers, infectious diseases, e.g. diseases caused by a bacterium,
CC
     virus, protozoan, mycoplasma, fungus, yeast, parasite or prion, or a
CC
     disease of the immune system, e.g. acquired immune deficiencies or
CC
     autoimmune diseases.
XX
SO
     Sequence 7 AA;
  Query Match
                          60.0%; Score 3; DB 20; Length 7;
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
```

```
Matches 3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                              0;
            2 SRL 4
QУ
              -111
Db
            2 SRL 4
RESULT 36
AAY05017
    AAY05017 standard; peptide; 7 AA.
AC
    AAY05017;
XX
DT
     16-JUN-1999 (first entry)
XX
DΕ
     Tumour antigen antibody light chain CDR2 clone F19.
XX
KW
     Tumour antigen; antibody; CDR; complementarity determining region;
KW
     binding molecule identification; tumour-specific binding polypeptide;
KW
     cancer therapy; light chain.
XX
OS
    Homo sapiens.
XX
PN
     WO9906834-A2.
XX
PD
     11-FEB-1999.
XX
PF
     04-AUG-1998;
                   98WO-US16280.
XX
PR
     04-AUG-1997;
                    97US-0905825.
PR
     04-AUG-1997:
                    97US-1112222.
XX
PA
     (IXSY-) IXSYS INC.
XX
PΤ
     Huse WD, Watkins JD, Wu H;
XX
DR
     WPI; 1999-153951/13.
DR
     N-PSDB; AAX28194.
XX
PΤ
     Identifying binding molecules for ligands, particularly tumour
PT
     antigens - by selectively immobilising a population of binding
PΤ
     molecules to a solid support and screening for binding to two or
PΤ
     more ligands
XX
PS
     Claim 15; Page 57; 80pp; English.
XX
CC
     This sequence represents a light chain complementarity determining
CC
     region (CDR) from a tumour antigen specific antibody.
CC
     The invention relates to a method for identifying a binding molecule
     having selective affinity for a ligand comprising: (a) selectively
CC
CC
     immobilising a diverse population of binding molecules to a solid
CC
     support; (b) simultaneously contacting the diverse population immobilised
CC
     on the solid support with 2 or more ligands; and (c) determining at least
CC
     one binding molecule which selectively binds to one or more of the
CC
     ligands. The method allows for the rapid and efficient methods for the
CC
     identification of binding molecules which exhibit selective affinity for
CC
     one or more ligands of interest. They are used particularly for
```

```
CC
     identifying tumour-specific binding polypeptides which can be used as
CC
     targeting agents for cancer therapy that minimises impact on non-tumour
CC
     tissues.
XX
SQ
    Sequence
                7 AA;
  Query Match
                          60.0%; Score 3; DB 20; Length 7;
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
 Matches
           3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
            2 SRL 4
Qу
              111
            3 SRL 5
Db
RESULT 37
AAY05021
ID
    AAY05021 standard; peptide; 7 AA.
XX
AC
    AAY05021;
XX
DТ
    16-JUN-1999 (first entry)
XX
DE
    Tumour antigen antibody light chain CDR2 clone F26.
XX
KW
     Tumour antigen; antibody; CDR; complementarity determining region;
KW
    binding molecule identification; tumour-specific binding polypeptide;
KW
    cancer therapy; light chain.
XX
OS
    Homo sapiens.
XX
PN
    W09906834-A2.
XX
    11-FEB-1999.
PD
XX
ΡF
     04-AUG-1998;
                   98WO-US16280.
XX
PR
     04-AUG-1997;
                    97US-0905825.
     04-AUG-1997;
PR
                   97US-1112222.
XX
     (IXSY-) IXSYS INC.
PΑ
XX
PΙ
    Huse WD, Watkins JD, Wu H;
XX
DR
    WPI; 1999-153951/13.
    N-PSDB; AAX28198.
DR
XX
PТ
    Identifying binding molecules for ligands, particularly tumour
PT
    antigens - by selectively immobilising a population of binding
PT
    molecules to a solid support and screening for binding to two or
PΤ
    more ligands
XX
PS
    Claim 15; Page 57; 80pp; English.
XX
CC
    This sequence represents a light chain complementarity determining
CC
    region (CDR) from a tumour antigen specific antibody.
CC
    The invention relates to a method for identifying a binding molecule
```

```
CC
     having selective affinity for a ligand comprising: (a) selectively
CC
     immobilising a diverse population of binding molecules to a solid
CC
     support; (b) simultaneously contacting the diverse population immobilised
     on the solid support with 2 or more ligands; and (c) determining at least
CC
CC
     one binding molecule which selectively binds to one or more of the
CC
     ligands. The method allows for the rapid and efficient methods for the
CC
     identification of binding molecules which exhibit selective affinity for
CC
     one or more ligands of interest. They are used particularly for
CC
     identifying tumour-specific binding polypeptides which can be used as
CC
     targeting agents for cancer therapy that minimises impact on non-tumour
CC
     tissues.
XX
SQ
     Sequence
                7 AA;
  Query Match
                          60.0%; Score 3; DB 20; Length 7;
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
                                                0; Indels
                                                                0; Gaps
          3; Conservative 0; Mismatches
                                                                             0;
            2 SRL 4
Qу
              Db
            3 SRL 5
RESULT 38
AAB28344
     AAB28344 standard; Peptide; 7 AA.
XX
AC
    AAB28344;
XX
DT
     16-FEB-2001 (first entry)
XX
DE
     Neuropeptide NPFII.
XX
KW
     Pesticidal; mosquito; Trypsin Modulating Oostatic Factor;
KW
     TMOF; hormone; trypsin biosynthesis; digestive enzyme; neuropeptide;
KW
     NPFII.
XX
OS
     Leptinotarsa decemlineata.
XX
PN
     WO200063235-A2.
XX
PD
     26-OCT-2000.
XX
ΡF
     18-APR-2000; 2000WO-US10375.
XX
PR
     21-APR-1999; 99US-0296113.
XX
PΑ
     (UYFL ) UNIV FLORIDA RES FOUND INC.
XX
PΙ
     Borovsky D;
XX
DR
     WPI; 2000-687157/67.
XX
PT
     Recombinant plant cell transformed to express a polynucleotide encoding
PΤ
     a pesticidal agent such as trypsin modulating oostatic factor compounds
PΤ
     or neuropeptide F compounds, is useful for controlling plant pests -
XX
```

```
PS
     Claim 20; Page 9; 48pp; English.
XX
CC
     The present sequence is neuropeptide NPFII from Colorado potato beetle.
CC
     This sequence was used to produce a recombinant plant cell. The
CC
     recombinant plant cell is useful for controlling agricultural pests, in
CC
     particular insects, and is also useful for inhibiting the production of
CC
     digestive enzymes in a pest to control the pest. The recombinant plant
CC
     cell may also comprise mosquito Trypsin Modulating Oostatic Factor
CC
     (TMOF) (AAB28346). TMOF is a hormone, which regulates the biosynthesis of
CC
     the digestive enzyme trypsin. TMOF is synthesised in the follicular
CC
     epithelium of the ovary 2-30 hours after a blood meal and is released
CC
     into the haemolymph, binding to the TMOF receptor on the midgut
CC
     epithelial cells, signalling the termination of trypsin biosynthesis.
XX
SO
     Sequence 7 AA;
  Query Match
                          60.0%; Score 3; DB 21; Length 7;
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
            3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
Qу
            2 SRL 4
              Db
            3 SRL 5
RESULT 39
AAB36149
     AAB36149 standard; peptide; 7 AA.
XX
AC
    AAB36149;
XX
DT
     20-FEB-2001 (first entry)
XX
DE
     Neuropeptide NPFII.
XX
KW
     Pesticidal; trypsin biosynthesis; neuropeptide F; NPF;
KW
     trypsin modulating oostatic factor; TMOF; NPFI.
XX
OS
     Synthetic.
XX
PN
     WO200062620-A2.
XX
PD
     26-OCT-2000.
XX
     18-APR-2000; 2000WO-US10247.
PF
XX
PR
     21-APR-1999;
                    99US-0295846.
XX
PA
     (UYFL ) UNIV FLORIDA RES FOUND INC.
XX
     Borovsky D, Schlesinger Y, Nauwelaers SMI;
PΙ
XX
DR
     WPI; 2000-672705/65.
XX
     Novel recombinant host useful for controlling pest such as mosquitoes,
PТ
PТ
     flesh flies, fleas, sand flies, house flies and dog flies comprises
     polynucleotide encoding a pesticidal polypeptide
PΤ
```

```
XX
PS
     Claim 20; Page 55; 57pp; English.
XX
     The present sequence is given in a specification which provides a
CC
CC
     recombinant host transformed with a polynucleotide encoding a pesticidal
CC
     polypeptide. The polypeptide is neuropeptide F (NPF), or its functional
CC
     equivalent, or trypsin modulating oostatic factor (TMOF), or a TMOF
CC
     receptor-binding compound. The transformed host may be applied to a
CC
     pest-inhabited area in order to control pests such as mosquitoes, flesh
CC
     flies, fleas, sand flies, house flies and dog flies. The presence of a
     transformed host in the environment may be monitored by providing a host
CC
     which has been transformed with a polynucleotide sequence which encodes
CC
CC
     a fluorescent compound. The pesticidal polypeptides are small in size
CC
     and permit more rapid and efficient penetration into the midgut. They are
CC
     also less expensive to produce by conventional chemical methods.
XX
SO
     Sequence
                7 AA;
  Query Match
                          60.0%; Score 3; DB 21; Length 7;
  Best Local Similarity
                          100.0%; Pred. No. 9.3e+05;
            3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                              0;
Qу
            2 SRL 4
              111
Db
            3 SRL 5
RESULT 40
AAB26822
     AAB26822 standard; peptide; 7 AA.
XX
AC
    AAB26822;
XX
DT
     23-JAN-2001 (first entry)
ХX
DE
     Peptidic membrane binding element.
XX
KW
     Organ perfusion; transplantation; storage; antiinflammatory;
KW
     immunosuppressive; vasotropic; complement activation inhibitor;
KW
     allograft rejection; ischaemia reperfusion injury.
XX
OS
     Synthetic.
XX
PN
     WO200053007-A1.
XX
PD
     14-SEP-2000.
XX
PF
     08-MAR-2000; 2000WO-GB00834.
XX
PR
     10-MAR-1999;
                    99GB-0005503.
XX
PΑ
     (ADPR-) ADPROTECH LTD.
XX
PΙ
     Smith RAG, Pratt JR, Sacks SH;
XX
    WPI; 2000-601920/57.
DR
XX
```

```
PT
     Preparation for perfusing organ prior to transplantation or storage
PΤ
     comprises soluble derivative of a soluble polypeptide which comprises
PT
     two heterologous membrane binding elements with low membrane affinity
PT
XX
PS
     Example 2; Page 20; 47pp; English.
XX
CC
     The present invention relates to formulations and preparations for
CC
     perfusing an organ prior to transplantation or storage. The preparation
CC
     comprises a soluble derivative or a polypeptide, which has two or more
CC
     heterologous membrane binding elements. The membrane binding elements are
CC
     capable of interacting, independently and with thermodynamic additivity,
CC
     with membrane components of the organ exposed to extracellular perfusion
CC
     fluids, and a flush storage solution. The preparation exhibits
CC
     antiinflammatory, immunosuppressive and vasotropic activity and works as
CC
     a complement activation inhibitor and an inhibitor of cytotoxic T
CC
     lymphocyte activity. The preparation is used for preparing an organ prior
CC
     to transplantation or storage and for prevention, treatment or
CC
     amelioration of a disease or disorder associated with inflammation,
CC
     inappropriate complement activation or inappropriate activation of
CC
     coagulant or thrombotic processes prior to, during or after
CC
     transplantation or storage of an organ. The preparation is useful for
CC
     treating hyperacute and acute allograft rejection of transplanted organs
CC
     such as kidney, heart, liver or lungs, ischaemia-reperfusion injury in
CC
     transplanted organs, xenograft rejection and corneal graft rejection. The
CC
     present sequence represents a peptidic membrane binding element used in
CC
     an example of the preparation of the invention.
XX
SO
     Sequence
               7 AA;
  Query Match
                          60.0%; Score 3; DB 21; Length 7;
                          100.0%; Pred. No. 9.3e+05;
  Best Local Similarity
            3; Conservative 0; Mismatches
                                                 0; Indels
                                                                 0; Gaps
                                                                             0;
            2 SRL 4
Qу
              Db
            3 SRL 5
RESULT 41
AAB17236
ID
    AAB17236 standard; Peptide; 7 AA.
XX
AC
    AAB17236;
XX
DT
     31-OCT-2000 (first entry)
XX
DE
     SH3 antagonist peptide sequence SEQ ID NO:292.
XX
KW
     Modified peptide; therapeutic agent; fusion; Fc domain; cancer;
KW
     autoimmune disease; cytostatic; antiasthmatic; thrombolytic; VEGF;
KW
     immunosuppressive; EPO; TPO; CTLA4; mimetic; IL-1; TNF; antagonist;
KW
     MMP; inhibitor; erythropoietin; thrombopoietin; interleukin 1;
KW
     cytotoxic T cell lymphocyte antigen 4; tumour necrosis factor;
KW
     vascular endothelial growth factor; matrix metalloproteinase;
KW
     asthma; thrombosis; pharmaceutical.
XX
```

```
OS
     Synthetic.
XX
PN
    WO200024782-A2.
XX
PD
     04-MAY-2000.
XX
PF
    25-OCT-1999;
                   99WO-US25044.
XX
PR
     23-OCT-1998;
                  98US-0105371.
PR
     22-OCT-1999;
                   99US-0428082.
XX
PΑ
     (AMGE-) AMGEN INC.
XX
PΙ
     Feige U, Liu C, Cheetham J, Boone TC;
XX
    WPI; 2000-350702/30.
DR
XX
PT
     Novel composition of matter comprising an Fc domain and
PT
     pharmacologically active peptides, useful for treating cancer and
PT
     autoimmune diseases -
XX
PS
     Claim 39; Page 298; 608pp; English.
XX
CC
     The present invention describes composition of matter (I) comprising an
CC
     Fc domain, pharmacologically active peptides, and linkers. Where (I) is:
CC
     (X1)a-F1-(X2)b, where: F1 = an Fc domain; X1 and X2 = are each
CC
     independently selected from -(L1)c-P1, -(L1)c-P1-(L2)d-P2,
CC
     -(L1)c-P1-(L2)d-P2-(L3)e-P^3, or -(L1)c-P1-(L2)d-P2-(L3)e-P3-(L4)f-P4
CC
     where P1, P2, P3, and P4 = are each independently sequences of
CC
     pharmacologically active peptides; L1, L2, L3, and L4 = are each
CC
     independently linkers; and a, b, c, d, e, and f = are each independently
CC
     0 or 1, provided that at least 1 of a and b is 1. The composition can
CC
     have cytostatic, antiasthmatic, thrombolytic and immunosuppressive
CC
     activities. DNAs, vectors and host cells from the present invention can
CC
     be used for producing pharmaceutical compositions. The compositions are
CC
     useful for treating cancer, asthma, thrombosis, or autoimmune diseases.
CC
     The use of an Fc domain (rather than a Fab domain) can provide a longer
CC
     half-life or incorporate functions such as Fc receptor binding, protein
CC
     A binding, complement fixation, and possibly placental transfer. AAA69443
CC
     to AAA69526 and AAB16955 to AAB18003 represent nucleotide and amino acid
CC
     sequences used in the exemplification of the present invention.
XX
SQ
     Sequence
                7 AA;
  Query Match
                          60.0%; Score 3; DB 21; Length 7;
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
  Matches
           3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
            2 SRL 4
Qу
              +
Db
            1 SRL 3
RESULT 42
AAB12005
ID
     AAB12005 standard; peptide; 7 AA.
XX
```

```
AC
    AAB12005;
XX
DT
     17-OCT-2000 (first entry)
XX
    Brain homing peptide # 19.
DE
XX
KW
    Brain; homing peptide; organ targeting; tissue targeting; mouse; cyclic.
XX
OS
    Mus sp.
XX
ΡN
    US6068829-A.
XX
PD
     30-MAY-2000.
XX
PF
     23-JUN-1997;
                  97US-0862855.
XX
PR
     11-SEP-1995;
                  95US-0526710.
PR
     10-MAR-1997;
                  97US-0813273.
XX
     (BURN-) BURNHAM INST.
PA
XX
PΙ
    Pasqualini R, Ruoslahti E;
XX
DR
    WPI; 2000-410850/35.
XX
РΤ
     Identifying and recovering organ homing molecules or peptides by in
     vivo panning comprises administering a library of diverse peptides
PT
PT
     linked to a tag which facilitates recovery of these peptides -
XX
     Disclosure; Column 14; 20pp; English.
PS
XX
CC
     The present sequence is a mouse brain homing peptide. This sequence was
CC
     identified by using in vivo panning to screen a library of potential
     organ homing molecules. The present sequence can be used to direct a
CC
CC
     moiety to a the brain tissue, by linking the moiety to the present
CC
     sequence. Examples of potential moieties are drugs, toxins or a
CC
    detectable label.
XX
SO
    Sequence 7 AA;
                         60.0%; Score 3; DB 21; Length 7;
 Query Match
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
 Matches 3; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
                                                                            0;
           2 SRL 4
Qу
              Db
           3 SRL 5
RESULT 43
AAY94221
ID
    AAY94221 standard; Peptide; 7 AA.
XX
AC
    AAY94221;
XX
DT
     08-AUG-2000 (first entry)
XX
```

```
DE
     Murine 16E10 light chain complementarily determining region 2.
XX
KW
     Antibody; RHAMM; receptor for hyaluronic acid mediated motility;
KW
     ras-dependent proliferation; leukaemia; cancer; lymphoma;
     inflammatory disease; proliferative disease; psoriasis;
KW
KW
     inflammatory bowel disease; rheumatoid arthritis;
KW
     proliferative cardiovascular disease; restenosis;
KW
     proliferative ocular disorder; diabetic retinopathy; haemangioma;
KW
     benign hyperproliferative disease; tumour formation; light chain;
KW
     variable region; 16E10; CDR2; complementarily determining region 2.
XX
OS
     Mus musculus.
XX
PN
     WO200029447-A1.
XX
PD
     25-MAY-2000.
XX
PF
     19-NOV-1999;
                    99WO-US27565.
XX
PR
     19-NOV-1998;
                   98US-0109041.
PR
     14-JUL-1999;
                    99US-0143692.
ХX
PΑ
     (SMIK ) SMITHKLINE BEECHAM CORP.
PΑ
     (SMIK ) SMITHKLINE BEECHAM PLC.
XX
ΡI
     Abrahamson JA, Holmes SD, Jackson JR;
XX
DR
    WPI; 2000-387752/33.
XX
PΤ
     Antibodies against receptor for hyaluronic acid mediated motility,
PT
     useful for treating or preventing proliferative diseases, e.g. cancer
PT
     or cardiovascular disease
XX
     Claim 23; Page 35; 39pp; English.
PS
XX
CC
     The present sequence is the amino acid sequence for the murine 16E10
CC
     light chain complementarily determining region 2. This forms part of the
CC
     monoclonal antibody 16E10, which can be used against the receptor for
CC
     hyaluronic acid mediated motility (RHAMM). RHAMM is required for
CC
     ras-transformation of cells, which leads to tumour formation, and so the
CC
     antibody can be used to treat proliferative disorders such as leukaemias,
CC
     solid tumour cancers and metastases including lymphomas, soft tissue,
CC
     brain, oesophageal, stomach, pancreatic, liver, lung, bladder, bone,
CC
     prostate, ovarian, cervical, uterine, skin, breast, testicular, kidney,
     head and neck and colon cancers, chronic inflammatory diseases such as
CC
CC
     psoriasis, inflammatory bowel disease and rheumatoid arthritis,
CC
     proliferative cardiovascular diseases such as restenosis, proliferative
CC
     ocular disorders such as diabetic retinopathy and benign
CC
    hyperproliferative diseases such as haemangiomas.
XX
SQ
     Sequence
               7 AA;
 Query Match
                          60.0%; Score 3; DB 21; Length 7;
 Best Local Similarity 100.0%; Pred. No. 9.3e+05;
 Matches
          3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
```

```
Db 3 SRL 5
```

```
RESULT 44
AAU72083
TD
    AAU72083 standard; Peptide; 7 AA.
XX
AC
    AAU72083;
ХΧ
DT
     26-FEB-2002 (first entry)
XX
DE
     Melanoma antigen, javelin peptide #69.
XX
KW
     Melanoma antiqen; MART-1; MAGE-1; qp100; cytostatic; immune response;
KW
     immunotherapeutic; heat shock protein; tyrosinase; BAGE; NYEs01; GM2;
KW
     tyrosinase related protein 1; tyrosinase related protein 2; vaccine;
     javelin molecule; melanoma antiqen recognised by T cells-1; human.
KW
XX
OS
     Bacteriophage M13.
XX
ΡN
     WO200178655-A2.
ХX
PD
     25-OCT-2001.
XX
PF
     17-APR-2001; 2001WO-US12449.
XX
PR
     17-APR-2000; 2000US-197462P.
XX
PΑ
     (HOUG/) HOUGHTON A.
PA
     (LIVI/) LIVINGSTON P.
     (ALAW/) AL-AWQATI Q.
PΑ
PΑ
     (MAYH/) MAYHEW M.
     (HOEM/) HOE M.
PA
XX
PΙ
     Houghton A, Livingston P, Al-awqati Q, Mayhew M, Hoe M;
XX
DR
     WPI; 2001-663092/76.
XX
PT
     Anti cancer vaccine for the treatment of melanoma comprises a heat
РT
     shock protein and a melanoma antigen i.e. tyrosinase -
XX
PS
     Disclosure; Page 17; 150pp; English.
XX
CC
     The invention relates to a method of induction of an immune response,
CC
     comprising administration of an immunotherapeutic composition, comprising
CC
     a heat shock protein, and a melanoma antiqen, where the melanoma
CC
     antigen is selected from tyrosinase, tyrosinase related protein 1,
CC
     tyrosinase related protein 2, qp 100, MAGE antigens, BAGE antigens,
CC
     NYEs01, MART antigens, GM2, antigenic portions and combinations of these.
CC
     The melanoma antigen is covalently bound to a javelin molecule, where the
CC
     melanoma antigen bound to the javelin molecule is non-covalently bound to
     the heat shock protein. The composition is useful for inducing an immune
CC
CC
     response for the treatment of melanoma. AAU71980-AAU72481 represent
CC
     melanoma antigen peptides of the invention.
XX
SO
     Sequence
                7 AA;
```

```
Query Match
                          60.0%; Score 3; DB 22; Length 7;
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
                                                  0; Indels 0; Gaps
            3; Conservative 0; Mismatches
                                                                               0;
            2 SRL 4
QУ
              \parallel \parallel \parallel
            2 SRL 4
Db
RESULT 45
AAE11811
     AAE11811 standard; peptide; 7 AA.
ID
XX
AC
     AAE11811;
XX
\mathsf{DT}
     18-DEC-2001 (first entry)
XX
DE
     Phage peptide #19 targetted to brain.
XX
KW
     Enriched library fraction; brain; kidney; tumour; panning; diagnostic;
KW
     molecular medicine; drug delivery; peptidomimetic; pharmaceutical.
XX
05
     Bacteriophage.
XX
PN
     US6296832-B1.
XX
PD
     02-OCT-2001.
XX
PF
     08-JAN-1999;
                  99US-0226985.
XX
PR
     23-JUN-1997;
                   97US-0862855.
PR
     11-SEP-1995;
                    95US-0526710.
PR
     10-MAR-1997:
                    97US-0813273.
XX
PΑ
     (BURN-) BURNHAM INST.
XX
PΙ
     Ruoslahti E, Pasqualini R;
ХX
DR
     WPI; 2001-610691/70.
XX
PΤ
     Enriched library fraction comprising molecules recovered by in vivo
PΤ
     panning that selectively home to a selected organ or tissue useful for
PΤ
     treating disease or in diagnostic methods
XX
PS
     Disclosure; Column 14; 21pp; English.
XX
CC
     The invention relates to an enriched library fraction containing
CC
     molecules that selectively home to a selected organ or tissue such as
CC
     brain, kidney or tumour recovered by in vivo panning. The invention
CC
     generally relates to the field of molecular medicine, drug delivery and
CC
     to a method of invivo panning for identifying a molecule that homes to a
     specific organ. The molecules, e.g., peptides, peptidomimetics, proteins
CC
CC
     and fragments of proteins contained in an enriched library fraction may
     be administered to a subject as part of a pharmaceutical composition to
CC
CC
     treat disease or in diagnostic methods. The present sequence is a
CC
     peptide from bacteriophage targetted to brain.
```

```
XX
SQ
     Sequence
                7 AA;
 Query Match
                          60.0%; Score 3; DB 22; Length 7;
 Best Local Similarity 100.0%; Pred. No. 9.3e+05;
            3; Conservative 0; Mismatches
                                                  0; Indels
                                                                 0; Gaps
                                                                             0;
            2 SRL 4
QУ
              Db
            3 SRL 5
RESULT 46
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    AAG63615 standard; peptide; 7 AA.
ID
XX
AC
    AAG63615;
XX
DT
    29-OCT-2001 (first entry)
XX
DE
    Complementarity determining region (CDR) 2 of ScFv1-1 H chain.
XX
KW
    Complementarity determining region; CDR; single chain antibody; ScFv;
KW
    hepatitis C virus; HCV; HCV infection; CD81; E2 protein; NS1 protein;
KW
     envelope glycoprotein.
XX
OS
    Homo sapiens.
XX
PN
    WO200158459-A1.
XX
PD
    16-AUG-2001.
XX
    13-FEB-2001; 2001WO-JP00967.
PF
XX
PR
     14-FEB-2000; 2000JP-0034906.
XX
PA
     (MITS-) MITSUBISHI-TOKYO PHARM INC.
XX
PΙ
     Itami S, Shibui T, Seki M, Yotsumoto Y, Matsuura Y, Miyamura T;
XX
DR
    WPI; 2001-496986/54.
XX
PT
    Remedies for hepatitis C containing substances with antiviral effects
PT
     e.g. antibodies, proteins, sulfated polysaccharides and low-molecular
PT
     compounds, by inhibiting binding of hepatitis C virus envelope
PT
    glycoprotein or CD81 -
XX
PS
    Claim 18; Page 73; 138pp; Japanese.
XX
CC
    The present sequence represents a complementarity determining region
CC
     (CDR) of a single chain (ScFv) antibody of the invention. The
CC
     specification describes a substance can inhibit the binding between
CC
    hepatitis C virus (HCV) and cells with potential HCV infection, cells
    with expression of CD81, or CD81. This substance is especially an
CC
    antibody with affinity towards HCV E2/NS1 protein, containing amino
CC
CC
    acid sequences based on the CDR1, CDR2 and CDR3 of the H and L chain
    variable regions. The antibody inhibits the viral envelope glycoprotein.
CC
```

```
CC
     It is also a CD81 inhibitor. The antibodies and drugs are used for
CC
     treatment and/or prevention of hepatitis C, or for diagnosis of
CC
    hepatitis C.
XX
SO
     Sequence
              7 AA;
  Query Match
                          60.0%; Score 3; DB 22; Length 7;
  Best Local Similarity
                          100.0%; Pred. No. 9.3e+05;
            3; Conservative 0; Mismatches 0; Indels
  Matches
                                                                 0; Gaps
                                                                             0;
            2 SRL 4
Qу
              | | | |
            3 SRL 5
RESULT 47
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    AAG63621 standard; peptide; 7 AA.
ΙD
XX
AC
    AAG63621;
XX
DT
    29-OCT-2001 (first entry)
XX
DE
    Complementarity determining region (CDR) 2 of ScFv1-3 H chain.
XX
KW
     Complementarity determining region; CDR; single chain antibody; ScFv;
    hepatitis C virus; HCV; HCV infection; CD81; E2 protein; NS1 protein;
KW
KW
     envelope glycoprotein.
XX
OS
    Homo sapiens.
XX
PN
    WO200158459-A1.
XX
PD
    16-AUG-2001.
XX
PF
    13-FEB-2001; 2001WO-JP00967.
XX
PR
     14-FEB-2000; 2000JP-0034906.
XX
PΑ
     (MITS-) MITSUBISHI-TOKYO PHARM INC.
XX
     Itami S, Shibui T, Seki M, Yotsumoto Y, Matsuura Y, Miyamura T;
PΙ
XX
DR
    WPI; 2001-496986/54.
XX
PT
     Remedies for hepatitis C containing substances with antiviral effects
PΤ
     e.g. antibodies, proteins, sulfated polysaccharides and low-molecular
PT
     compounds, by inhibiting binding of hepatitis C virus envelope
PT
    glycoprotein or CD81 -
XX
PS
     Claim 22; Page 75; 138pp; Japanese.
XX
CC
     The present sequence represents a complementarity determining region
     (CDR) of a single chain (ScFv) antibody of the invention. The
CC
     specification describes a substance can inhibit the binding between
CC
    hepatitis C virus (HCV) and cells with potential HCV infection, cells
CC
     with expression of CD81, or CD81. This substance is especially an
CC
```

```
CC
     antibody with affinity towards HCV E2/NS1 protein, containing amino
CC
     acid sequences based on the CDR1, CDR2 and CDR3 of the H and L chain
CC
     variable regions. The antibody inhibits the viral envelope glycoprotein.
CC
     It is also a CD81 inhibitor. The antibodies and drugs are used for
CC
     treatment and/or prevention of hepatitis C, or for diagnosis of
CC
     hepatitis C.
XX
SO
     Sequence 7 AA;
  Query Match
                          60.0%; Score 3; DB 22; Length 7;
                          100.0%; Pred. No. 9.3e+05;
  Best Local Similarity
            3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
            2 SRL 4
Qу
              | | |
Dh
            3 SRL 5
RESULT 48
AAG98766
     AAG98766 standard; peptide; 7 AA.
XX
AC
    AAG98766;
XX
DT
     21-SEP-2001 (first entry)
XX
DE
     Human cell death protective cDNA clone CNI-00721 ORF19 peptide, SEQ:330.
XX
KW
     Cell death protective; apoptosis; necrosis; human; drug screening;
KW
     cell death-associated disorder; central nervous system disorder;
KW
     psychiatric disorder; neurological disorder; ischaemia-related disorder;
KW
     stroke; cerebral infarction; ischaemic encephalopathy;
KW
     neurodegenerative disorder; Alzheimer's disease; Huntington's disease;
KW
     Parkinson's disease; infection; meningitis; malaria; trypanosomiasis;
KW
     vascular disease; opthalmological disorder; diabetic retinopathy;
KW
     macular degeneration; hypertension; myocardial infarction;
KW
     atherosclerosis; respiratory disorder; asthma; transgenic animal;
KW
     chronic obstructive pulmonary disease; neoplastic condition; cancer;
KW
     benign tumour; anaemia; gastrointestinal disorder; gastritis;
KW
     ulcerative colitis; liver disease; biliary cirrhosis; kidney disorder;
KW
     glomerulonephritis; cystitis; endometriosis; endocrine disorder;
KW
     Grave's disease; Hashimoto's thyroiditis; skin condition; dermatitis;
KW
     urticaria; immune disorder; acquired immunodeficiency syndrome; AIDS.
XX
OS
     Homo sapiens.
XX
ΡN
     WO200145638-A2.
XX
PD
     28-JUN-2001.
XX
ΡF
     11-DEC-2000; 2000WO-US33547.
XX
PR
     14-DEC-1999;
                    99US-0461697.
XX
PΑ
     (COGE-) COGENT NEUROSCIENCE INC.
XX
PΙ
     Lo DC, Barney S, Thomas MB, Portbury SD, Puranam K, Katz LC;
```

```
XX
DR
    WPI; 2001-390297/41.
DR
    N-PSDB; AAH84281, AAH84300.
XX
PΤ
    Novel protective sequence polynucleotides and polypeptides, used to
PT
     identify modulators of their expression and activity, which are used in
PΤ
     to treat central nervous system conditions, diseases and disorders -
XX
PS
    Claim 1; Fig 11S; 325pp; English.
XX
CC
    Sequences AAH84132-AAH84370 represent human nucleic acid sequences which
CC
    protect against cell death (i.e., apoptosis or necrosis). Sequences
CC
    AAH84132, AAH84145, AAH84170, AAH84201, AAH84210, AAH84226, AAH84265,
CC
    AAH84281, AAH84315 and AAH84367 represent 10 full-length cDNA clones,
CC
    while the remaining nucleic acid sequences within the range given above
CC
    represent the open reading frames (ORFs) of these cDNA clones. Sequences
CC
    AAG98610-AAG98829 represent the polypeptides encoded by the cell death
CC
    protective ORFs. The cell death protective cDNA clones are able to
CC
    prevent, delay or reverse progression through the apoptotic or necrotic
CC
    pathways when injected into a cell predisposed to or undergoing cell
CC
    death. The cell death protective nucleic acids and polypeptides can be
CC
    used in the diagnosis and treatment of disorders associated with cell
CC
    death, and to screen for compounds which modulate their activity or
CC
     expression. Such modulators, preferably a small organic molecule, an
CC
    antibody, a ribozyme, or an antisense molecule, can also be used to treat
CC
    cell death-related diseases. Such diseases include those associated with
CC
     the central nervous system including psychiatric or neurological
CC
    disorders, especially ischaemia-related conditions such as strokes, and
CC
    also includes neurodegenerative disorders such as Alzheimer's disease,
CC
    Huntington's disease, or Parkinson's disease. The modulators may also be
CC
    used to treat infections such as meningitis, malaria, or trypanosomiasis;
CC
    vascular diseases such as ischaemic encephalopathy or cerebral
CC
     infarction; eye conditions such as diabetic retinopathy or macular
CC
    degeneration; hypertension; myocardial infarction; atherosclerosis;
CC
    respiratory conditions such as asthma or chronic obstructive pulmonary
CC
    disease; neoplastic conditions such as cancers or benign tumours; blood
CC
    cell conditions such as anaemia; gastrointestinal conditions such as
CC
    gastritis or ulcerative colitis; liver conditions such as biliary
CC
    cirrhosis; kidney disorders such as glomerulonephritis; cystitis;
CC
     endometriosis; endocrine disorders such as Grave's disease or Hashimoto's
CC
     thyroiditis; skin conditions such as dermatitis or urticaria; or immune
CC
    system disorders such as acquired immunodeficiency syndrome (AIDS). The
CC
    nucleic acids may additionally be used to generate animal models of
CC
     cell death-associated disorders. The present sequence represents a
CC
     cell death protective polypeptide.
XX
SQ
    Sequence
                7 AA;
 Query Match
                          60.0%; Score 3; DB 22; Length 7;
 Best Local Similarity 100.0%; Pred. No. 9.3e+05;
            3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
           2 SRL 4
Qу
              | | | |
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4 SRL 6

Db

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RESULT 49
AAB84974
ΙD
     AAB84974 standard; protein; 7 AA.
XX
AC
     AAB84974;
XX
DT
     06-AUG-2001 (first entry)
XX
DE
     Clone 2 scFv CDR L2 region binding to target antigen D.
ХХ
KW
     Antiinflammatory; antiallergic; cytostatic; antibacterial; antiviral;
KW
     immunosuppressive; antidiabetic; neuroprotective; antirheumatic;
KW
     antiarthritic; dermatological; immune response; modulator; enzyme;
     antigen D; T-cell receptor; complementary determining region; CDR.
KW
XX
OS
     Homo sapiens.
XX
PN
     WO200140312-A2.
XX
PD
     07-JUN-2001.
XX
     04-DEC-2000; 2000WO-GB04629.
ΡF
XX
PR
     03-DEC-1999;
                    99GB-0028789.
XX
PΑ
     (DIVE-) DIVERSYS LTD.
XX
     Holt LJ, De Wildt RMT,
PΙ
                              Tomlinson I;
XX
     WPI; 2001-374801/39.
DR
XX
PΤ
     Isolating a polypeptide of interest from a naive polypeptide repertoire
PT
     which has not been preselected with a specific target ligand involves
     direct screening of naive polypeptide repertoire with the target ligand
PT
PT
ХX
PS
     Example 2; Page 29; 41pp; English.
XX
CC
     The invention relates to isolating, from a naive polypeptide (I)
CC
     repertoire (antibody or T-cell receptor polypeptides), which has not been
CC
     preselected with a specific target ligand, a polypeptide of interest (II)
CC
     capable of interacting with the specific target ligand. The method
CC
     involves direct screening of (I) with the target ligand in order to
CC
     identify (II). The polypeptides selected by the method may be used in any
CC
     process which involves ligand-polypeptide binding including in vivo
CC
     therapeutic and prophylactic applications, in vitro and in vivo
CC
     diagnostic applications, in vitro assay and reagent applications. Enzyme
CC
     variants generated and selected by the method may be assayed for
CC
     activity, either in vitro or in vivo using standard techniques. Antibody
CC
     polypeptides selected by the method are used diagnostically in Western
CC
     analysis and in situ protein detection. The selected antibodies are
CC
     useful for preventing, suppressing or treating inflammatory states,
CC
     allergic hypersensitivity, cancer, bacterial or viral infection and
     autoimmune disorders e.g., type I diabetes, multiple sclerosis,
CC
CC
     rheumatoid arthritis, systemic lupus erythematosus, Crohn's disease and
CC
     myasthenia gravis. The selected polypeptides may be used extracorporeally
CC
     or in vitro selectively to kill, deplete or effectively remove a target
```

```
CC
     cell population from a heterogeneous collection of cells. Sequences
     AAB84968-979 represent complementary determining regions (CDRs) of scFv
CC
CC
     heavy and light chains binding to target antigens M and D.
XX
SO
     Sequence
                7 AA;
  Query Match
                          60.0%; Score 3; DB 22; Length 7;
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
  Matches
            3; Conservative 0; Mismatches
                                                 0; Indels
                                                                 0; Gaps
                                                                             0;
Qу
            2 SRL 4
              Db
            3 SRL 5
RESULT 50
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ID
     AAB84986 standard; peptide; 7 AA.
XX
AC
     AAB84986;
XX
DT
     06-AUG-2001 (first entry)
XX
DE
     G12 scFv CDR L2 region binding to target antigen B.
XX
KW
     Antiinflammatory; antiallergic; cytostatic; antibacterial; antiviral;
KW
     immunosuppressive; antidiabetic; neuroprotective; antirheumatic;
KW
     antiarthritic; dermatological; immune response; modulator; enzyme;
     antigen; T-cell receptor; complementary determining region; CDR.
KW
XX
OS
     Homo sapiens.
XX
PN
     WO200140312-A2.
XX
     07-JUN-2001.
PD
ХX
PF
     04-DEC-2000; 2000WO-GB04629.
XX
PR
     03-DEC-1999; 99GB-0028789.
XX
PA
     (DIVE-) DIVERSYS LTD.
XX
PΙ
     Holt LJ, De Wildt RMT,
                             Tomlinson I;
XX
     WPI; 2001-374801/39.
DR
XX
PT
     Isolating a polypeptide of interest from a naive polypeptide repertoire
PΤ
     which has not been preselected with a specific target ligand involves
PT
     direct screening of naive polypeptide repertoire with the target ligand
PT
XX
PS
     Example 1; Fig 2; 41pp; English.
ХX
CC
     The invention relates to isolating, from a naive polypeptide (I)
CC
     repertoire (antibody or T-cell receptor polypeptides), which has not been
CC
     preselected with a specific target ligand, a polypeptide of interest (II)
CC
     capable of interacting with the specific target ligand. The method
```

```
CC
     involves direct screening of (I) with the target ligand in order to
CC
    identify (II). The polypeptides selected by the method may be used in any
CC
    process which involves ligand-polypeptide binding including in vivo
    therapeutic and prophylactic applications, in vitro and in vivo
CC
    diagnostic applications, in vitro assay and reagent applications. Enzyme
CC
CC
    variants generated and selected by the method may be assayed for
CC
    activity, either in vitro or in vivo using standard techniques. Antibody
CC
    polypeptides selected by the method are used diagnostically in Western
CC
    analysis and in situ protein detection. The selected antibodies are
CC
    useful for preventing, suppressing or treating inflammatory states,
CC
    allergic hypersensitivity, cancer, bacterial or viral infection and
CC
    autoimmune disorders e.g., type I diabetes, multiple sclerosis.
CC
    rheumatoid arthritis, systemic lupus erythematosus, Crohn's disease and
CC
    myasthenia gravis. The selected polypeptides may be used extracorporeally
CC
    or in vitro selectively to kill, deplete or effectively remove a target
CC
    cell population from a heterogeneous collection of cells. Sequences
CC
    AAB84980-995 represent complementary determining regions (CDRs) of \mathsf{scFv}
    heavy and light chains binding to target antigens M, B, C and O.
CC
XX
SO
    Sequence 7 AA;
 Query Match
                         60.0%; Score 3; DB 22; Length 7;
 Best Local Similarity 100.0%; Pred. No. 9.3e+05;
           3; Conservative 0; Mismatches
                                                0; Indels 0; Gaps
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Qу
           2 SRL 4
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Search completed: November 28, 2003, 14:30:54 Job time: 43 secs

3 SRL 5

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OM protein - protein search, using sw model

Run on: November 28, 2003, 14:30:09; Search time 22 Seconds

(without alignments)

9.616 Million cell updates/sec

Title: US-09-228-866-45

Perfect score: 5

Sequence: 1 XSRLX 5

Scoring table: OLIGO

Gapop 60.0 , Gapext 60.0

Searched: 328717 seqs, 42310858 residues

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Total number of hits satisfying chosen parameters: 153337

Minimum DB seq length: 5
Maximum DB seq length: 23

Post-processing: Listing first 100 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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2	3	60.0	5	4	US-09-638-202A-41	Sequence 41, Appl
3	3	60.0	5	4	US-09-638-202A-98	Sequence 98, Appl
4	3	60.0	6	1	US-08-405-933-13	Sequence 13, Appl
5	3	60.0	6	1	US-08-129-456A-19	Sequence 19, Appl
6	3	60.0	6	2	US-08-350-260A-494	Sequence 494, App
7	3	60.0	6	2	US-08-482-228-178	Sequence 178, App
8	3	60.0	6	2	US-08-687-219B-10	Sequence 10, Appl
9	3	60.0	6	3	US-08-482-528-178	Sequence 178, App
10	3	60.0	6	3	US-08-360-821B-18	Sequence 18, Appl
11	3	60.0	6	3	US-09-177-249-50	Sequence 50, Appl

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74	3	60.0	9	3	US-09-226-985-3	Sequence 3, Appli
75	3	60.0	9	3	US-09-226-985-5	Sequence 5, Appli
76	3	60.0	9	4	US-09-227-906-1	Sequence 1, Appli
77	3	60.0	9	4	US-09-227-906-3	Sequence 3, Appli
78	3	60.0	9	4	US-09-227-906-5	Sequence 5, Appli
79	3	60.0	9	4	US-09-104-337A-491	Sequence 491, App
80	3	60.0	9	4	US-09-104-337A-492	Sequence 492, App
81	3	60.0	9	4	US-09-104-337A-493	Sequence 493, App
82	3	60.0	9	4	US-09-670-456A-3	Sequence 3, Appli
83	3	60.0	9	4	US-09-670-456A-5	Sequence 5, Appli
84	3	60.0	9	4	US-09-344-040C-118	Sequence 118, App
85	3	60.0	9	4	US-09-341-982-24	Sequence 24, Appl
86	3	60.0	10	1	US-08-129-456A-30	Sequence 30, Appl
87	3	60.0	10	1	US-07-965-667A-3	Sequence 3, Appli
88	3	60.0	10	1	US-08-627-497-8	Sequence 8, Appli
89	3	60.0	10	2	US-08-556-597-163	Sequence 163, App
90	3	60.0	10	2	US-08-488-161-21	Sequence 21, Appl
91	3	60.0	10	2	US-08-902-623-60	Sequence 60, Appl
92	3	60.0	10	2	US-08-595-043A-73	Sequence 73, Appl
93	3	60.0	10	2	US-08-629-291A-26	Sequence 26, Appl
94	3	60.0	10	2	US-08-792-553-8	Sequence 8, Appli
95	3	60.0	10	2	US-08-658-335B-26	Sequence 26, Appl
96	3	60.0	10	3	US-09-273-685-21	Sequence 21, Appl
97	3	60.0	10	3	US-08-484-819-3	Sequence 3, Appli
98	3	60.0	10	3	US-08-765-856-15	Sequence 15, Appl
99	3	60.0	10	3	US-08-894-173-3	Sequence 3, Appli
100	3	60.0	10	3	US-08-817-177-12	Sequence 12, Appl

ALIGNMENTS

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RESULT 1
US-08-405-933-11
; Sequence 11, Application US/08405933
; Patent No. 5516889
; GENERAL INFORMATION:
    APPLICANT: Hollenberg, Morley D.
    APPLICANT: Matsoukas, John M.
    APPLICANT: Moore, Graham J.
    TITLE OF INVENTION: Synthetic Thrombin Receptor Peptides
    NUMBER OF SEQUENCES: 50
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Burns, Doane, Swecker & Mathis
      STREET: Washington & Prince Streets, P.O. Box 1404
      CITY: Alexandria
     STATE: Virginia
     COUNTRY: USA
     ZIP: 22313-1404
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
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OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
     APPLICATION NUMBER: US/08/405,933
     FILING DATE:
      CLASSIFICATION: 514
   PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 08/080,643
      FILING DATE: 21-JUN-1993
   ATTORNEY/AGENT INFORMATION:
     NAME: Dillahunty, Mary Ann
      REGISTRATION NUMBER: 34,576
     REFERENCE/DOCKET NUMBER: 028722-059
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (415)854-7400
      TELEFAX: (415)854-8275
  INFORMATION FOR SEQ ID NO: 11:
   SEQUENCE CHARACTERISTICS:
     LENGTH: 5 amino acids
      TYPE: amino acid
      TOPOLOGY: circular
    MOLECULE TYPE: peptide
US-08-405-933-11
  Query Match
                         60.0%; Score 3; DB 1; Length 5;
 Best Local Similarity 100.0%; Pred. No. 2.5e+05;
 Matches 3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                          0;
Qу
           2 SRL 4
            Db
           1 SRL 3
RESULT 2
US-09-638-202A-41
; Sequence 41, Application US/09638202A
; Patent No. 6462189
   GENERAL INFORMATION:
        APPLICANT: Koieda, Shohei
        TITLE OF INVENTION: ARTIFICIAL ANTIBODY POLYPEPTIDES
        NUMBER OF SEQUENCES: 118
        CORRESPONDENCE ADDRESS:
             ADDRESSEE: Schwegman, Lundberg, Woessner & Kluth P.A.
             STREET: 121 South Eighth Street, Ste. 1600
             CITY: Minneapolis
             STATE: MN
             COUNTRY: USA
             ZIP: 55402
        COMPUTER READABLE FORM:
             MEDIUM TYPE: Diskette
             COMPUTER: IBM Compatible
             OPERATING SYSTEM: DOS
             SOFTWARE: FastSEQ Version 2.0b
        CURRENT APPLICATION DATA:
             APPLICATION NUMBER: US/09/638,202A
             FILING DATE: 11-Aug-2000
        PRIOR APPLICATION DATA:
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APPLICATION NUMBER: 09/096,749
              FILING DATE: <Unknown>
        ATTORNEY/AGENT INFORMATION:
             NAME: Ann S. Viksnins
              REGISTRATION NUMBER: 37,748
              REFERENCE/DOCKET NUMBER: 109.034US1
        TELECOMMUNICATION INFORMATION:
              TELEPHONE: (612) 373-6900
             TELEFAX: (612) 339-3061
 INFORMATION FOR SEQ ID NO: 41:
        SEQUENCE CHARACTERISTICS:
             LENGTH: 5 amino acids
             TYPE: amino acid
             STRANDEDNESS: single
             TOPOLOGY: linear
        MOLECULE TYPE: peptide
        HYPOTHETICAL: NO
        ANTI-SENSE: NO
        FRAGMENT TYPE: internal
        ORIGINAL SOURCE:
        SEQUENCE DESCRIPTION: SEQ ID NO: 41:
US-09-638-202A-41
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QУ
           2 SRL 4
             1 SRL 3
Db
RESULT 3
US-09-638-202A-98
; Sequence 98, Application US/09638202A
; Patent No. 6462189
   GENERAL INFORMATION:
        APPLICANT: Koieda, Shohei
        TITLE OF INVENTION: ARTIFICIAL ANTIBODY POLYPEPTIDES
        NUMBER OF SEQUENCES: 118
        CORRESPONDENCE ADDRESS:
             ADDRESSEE: Schwegman, Lundberg, Woessner & Kluth P.A.
             STREET: 121 South Eighth Street, Ste. 1600
             CITY: Minneapolis
             STATE: MN
             COUNTRY: USA
             ZIP: 55402
        COMPUTER READABLE FORM:
             MEDIUM TYPE: Diskette
             COMPUTER: IBM Compatible
             OPERATING SYSTEM: DOS
             SOFTWARE: FastSEQ Version 2.0b
        CURRENT APPLICATION DATA:
             APPLICATION NUMBER: US/09/638,202A
             FILING DATE: 11-Aug-2000
        PRIOR APPLICATION DATA:
             APPLICATION NUMBER: 09/096,749
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FILING DATE: <Unknown>
        ATTORNEY/AGENT INFORMATION:
              NAME: Ann S. Viksnins
              REGISTRATION NUMBER: 37,748
              REFERENCE/DOCKET NUMBER: 109.034US1
        TELECOMMUNICATION INFORMATION:
              TELEPHONE: (612) 373-6900
              TELEFAX: (612) 339-3061
   INFORMATION FOR SEQ ID NO: 98:
         SEQUENCE CHARACTERISTICS:
             LENGTH: 5 amino acids
              TYPE: amino acid
              STRANDEDNESS: single
              TOPOLOGY: linear
        MOLECULE TYPE: peptide
        HYPOTHETICAL: NO
        ANTI-SENSE: NO
        FRAGMENT TYPE: internal
        ORIGINAL SOURCE:
        SEQUENCE DESCRIPTION: SEQ ID NO: 98:
US-09-638-202A-98
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  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
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          3; Conservative 0; Mismatches 0; Indels
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           2 SRL 4
Qу
              Db
           1 SRL 3
RESULT 4
US-08-405-933-13
; Sequence 13, Application US/08405933
; Patent No. 5516889
  GENERAL INFORMATION:
    APPLICANT: Hollenberg, Morley D.
    APPLICANT: Matsoukas, John M.
    APPLICANT: Moore, Graham J.
    TITLE OF INVENTION: Synthetic Thrombin Receptor Peptides
    NUMBER OF SEQUENCES: 50
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Burns, Doane, Swecker & Mathis
      STREET: Washington & Prince Streets, P.O. Box 1404
      CITY: Alexandria
      STATE: Virginia
      COUNTRY: USA
      ZIP: 22313-1404
    COMPUTER READABLE FORM:
;
      MEDIUM TYPE: Floppy disk
;
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
    APPLICATION NUMBER: US/08/405,933
      FILING DATE:
     CLASSIFICATION: 514
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PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 08/080,643
      FILING DATE: 21-JUN-1993
    ATTORNEY/AGENT INFORMATION:
      NAME: Dillahunty, Mary Ann
      REGISTRATION NUMBER: 34,576
      REFERENCE/DOCKET NUMBER: 028722-059
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (415)854-7400
      TELEFAX: (415)854-8275
  INFORMATION FOR SEQ ID NO: 13:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 6 amino acids
      TYPE: amino acid
      TOPOLOGY: circular
    MOLECULE TYPE: peptide
    FEATURE:
     NAME/KEY: Modified-site
      LOCATION: 6
      OTHER INFORMATION: /label= Xaa
      OTHER INFORMATION: /note= "Xaa is Acp."
US-08-405-933-13
  Query Match
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  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
 Matches
          3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                           0;
           2 SRL 4
Qу
             +
Db
           1 SRL 3
RESULT 5
US-08-129-456A-19
; Sequence 19, Application US/08129456A
; Patent No. 5641867
; GENERAL INFORMATION:
    APPLICANT: Stern, David M.
    APPLICANT: Clauss, Matthias
    APPLICANT: Kao, Janet
    APPLICANT: Kayton, Mark
    APPLICANT: Libutti, Steven K.
    TITLE OF INVENTION: Endothelial-Monocyte Activating
    TITLE OF INVENTION: Polypeptide II: A Mediator Which
    TITLE OF INVENTION: Activates Host Response
    NUMBER OF SEQUENCES: 37
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Cooper & Dunham LLP
      STREET: 1185 Avenue of the Americas
      CITY: New York
      STATE: New York
     COUNTRY: USA
     ZIP: 10036
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
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SOFTWARE: PatentIn Release #1.0 Version #1.30
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/129,456A
      FILING DATE: 29-SEP-1993
      CLASSIFICATION: 530
    ATTORNEY/AGENT INFORMATION:
      NAME: White, John P.
      REGISTRATION NUMBER: 28,678
      REFERENCE/DOCKET NUMBER: 41735
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 212 278 0400
      TELEFAX: 212 391 0526
  INFORMATION FOR SEQ ID NO: 19:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 6 amino acids
      TYPE: amino acid
      TOPOLOGY: linear
    MOLECULE TYPE: Peptide
US-08-129-456A-19
                         60.0%; Score 3; DB 1; Length 6;
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 Best Local Similarity 100.0%; Pred. No. 2.5e+05;
 Matches 3; Conservative 0; Mismatches 0; Indels
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           2 SRL 4
Qу
             2 SRL 4
Db
RESULT 6
US-08-350-260A-494
; Sequence 494, Application US/08350260A
; Patent No. 5962255
  GENERAL INFORMATION:
    APPLICANT: Winter, Gregory Paul
    APPLICANT: Griffiths, Andrew David
    APPLICANT: Williams, Samuel Cameron
    APPLICANT: Waterhouse, Peter
    APPLICANT: Nissim, Ahuva
    APPLICANT: Johnson, Kevin Stuart
    APPLICANT: Smith, Andrew John Hammond
    TITLE OF INVENTION: Methods for producing members of specific
    TITLE OF INVENTION: binding pairs
    NUMBER OF SEQUENCES: 602
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: David W. Clough
      STREET: Marshall, O'Toole, Gerstein, Murray & Borun
      STREET: 6300 Sears Tower, 233 South Wacker Drive
      CITY: Chicago
      STATE: Illinois
      COUNTRY: USA
      ZIP: 60606-6402
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25 (EPO)
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CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/350.260A
      FILING DATE: 05-DEC-1994
      CLASSIFICATION: 435
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: GB 9110549.4
      FILING DATE: 15-MAY-1991
   PRIOR APPLICATION DATA:
      APPLICATION NUMBER: GB 9206318.9
      FILING DATE: 24-MAR-1992
   PRIOR APPLICATION DATA:
      APPLICATION NUMBER: PCT/GB91/01134
     FILING DATE: 10-JUL-1991
    PRIOR APPLICATION DATA:
    APPLICATION NUMBER: PCT/GB92/00883
      FILING DATE: 15-MAY-1992
   PRIOR APPLICATION DATA:
    APPLICATION NUMBER: PCT/GB93/00605
      FILING DATE: 24-MAR-1993
   PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 08/150,002
      FILING DATE: 31-MAR-1994
   PRIOR APPLICATION DATA:
     APPLICATION NUMBER: US 08/307,619
      FILING DATE: 16-SEP-1994
   ATTORNEY/AGENT INFORMATION:
     NAME: Clough, David W
      REGISTRATION NUMBER: 36,107
      REFERENCE/DOCKET NUMBER: 28111/32372
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 312-474-6300
  INFORMATION FOR SEQ ID NO: 494:
   SEQUENCE CHARACTERISTICS:
     LENGTH: 6 amino acids
      TYPE: amino acid
      STRANDEDNESS: single
      TOPOLOGY: linear
US-08-350-260A-494
                        60.0%; Score 3; DB 2; Length 6;
 Query Match
 Best Local Similarity 100.0%; Pred. No. 2.5e+05;
 Matches 3; Conservative 0; Mismatches 0; Indels 0; Gaps
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           2 SRL 4
            4 SRL 6
RESULT 7
US-08-482-228-178
; Sequence 178, Application US/08482228
; Patent No. 5968753
  GENERAL INFORMATION:
    APPLICANT: Tseng-Law, Janet
    APPLICANT: Kobori, Joan A.
    APPLICANT: Al-Abdaly, Fahad A.
    APPLICANT: Guillermo, Roy
```

```
APPLICANT: Helgerson, Sam L.
     APPLICANT: Deans, Robert J.
     TITLE OF INVENTION: POSITIVE AND POSITIVE/NEGATIVE CELL
     TITLE OF INVENTION: SELECTION MEDIATED BY PEPTIDE RELEASE
     NUMBER OF SEQUENCES: 215
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Janice Guthrie, Ph.D.
      STREET: P.O. Box 15210
      CITY: Irvine
      STATE: California
     COUNTRY: USA
       ZIP: 92713-5210
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
       COMPUTER: IBM PC compatible
       OPERATING SYSTEM: PC-DOS/MS-DOS
     SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
     APPLICATION NUMBER: US/08/482,228
     FILING DATE: 07-JUN-1995
      CLASSIFICATION: 435
   ATTORNEY/AGENT INFORMATION:
      NAME: Guthrie, Janice
      REGISTRATION NUMBER: 35,170
      REFERENCE/DOCKET NUMBER: IT-4630CIP3
    TELECOMMUNICATION INFORMATION:
       TELEPHONE: (714) 440-5353
       TELEFAX: (714) 553-1952
   INFORMATION FOR SEQ ID NO: 178:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 6 amino acids
       TYPE: amino acid
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-08-482-228-178
  Query Match
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  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
 Matches
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Qу
           2 SRL 4
              \parallel \parallel \parallel
           2 SRL 4
RESULT 8
US-08-687-219B-10
; Sequence 10, Application US/08687219B
; Patent No. 5985541
; GENERAL INFORMATION:
    APPLICANT: JOLIVET-REYNAUD, Colette
    TITLE OF INVENTION: PEPTIDE CAPABLE OF BEING RECOGNIZED BY
    TITLE OF INVENTION: ANTIBODIES RECOGNIZING THE C33 ANTIGEN OF HEPATITIS C
VIRUS
   NUMBER OF SEQUENCES: 40
    CORRESPONDENCE ADDRESS:
     ADDRESSEE: OLIFF & BERRIDGE, PLC
```

```
STREET: 700 South Washington Street
       CITY: Alexandria
      STATE: VA
      COUNTRY: USA
      ZIP: 22314
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
       COMPUTER: PC compatible
       OPERATING SYSTEM: PC-DOS/MS-DOS
       SOFTWARE: PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/687,219B
      FILING DATE: 25-JUL-1996
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: FR 95 09005
      FILING DATE: 25-JUL-1995
    ATTORNEY/AGENT INFORMATION:
      NAME: Berridge, William P.
      REGISTRATION NUMBER: 30,024
      REFERENCE/DOCKET NUMBER: WPB 38526
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 703 836-6400
      TELEFAX: 703 836-2787
  INFORMATION FOR SEQ ID NO: 10:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 6 amino acids
      TYPE: amino acid
      TOPOLOGY: unknown
    MOLECULE TYPE: peptide
    FRAGMENT TYPE: N-terminal or C-terminal or internal
US-08-687-219B-10
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Qу
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RESULT 9
US-08-482-528-178
; Sequence 178, Application US/08482528
; Patent No. 6017719
  GENERAL INFORMATION:
    APPLICANT: Tseng-Law, Janet
    APPLICANT: Kobori, Joan A.
    APPLICANT: Al-Abdaly, Fahad A.
    APPLICANT: Guillermo, Roy
    APPLICANT: Helgerson, Sam L.
    APPLICANT: Deans, Robert J.
    TITLE OF INVENTION: POSITIVE AND POSITIVE/NEGATIVE CELL
    TITLE OF INVENTION: SELECTION MEDIATED BY PEPTIDE RELEASE
    NUMBER OF SEQUENCES: 215
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Janice Guthrie, Ph.D.
```

```
STREET: P.O. Box 15210
      CITY: Irvine
      STATE: California
     COUNTRY: USA
     ZIP: 92713-5210
    COMPUTER READABLE FORM:
     MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
   CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/482,528
      FILING DATE: 07-JUN-1995
      CLASSIFICATION: 435
   ATTORNEY/AGENT INFORMATION:
     NAME: Guthrie, Janice
      REGISTRATION NUMBER: 35,170
     REFERENCE/DOCKET NUMBER: IT-4630CIP4
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (714) 440-5353
      TELEFAX: (714) 553-1952
  INFORMATION FOR SEQ ID NO: 178:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 6 amino acids
      TYPE: amino acid
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-08-482-528-178
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 Matches 3; Conservative 0; Mismatches 0; Indels
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Qу
             \parallel \parallel \parallel
Db
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RESULT 10
US-08-360-821B-18
; Sequence 18, Application US/08360821B
; Patent No. 6228837
; GENERAL INFORMATION:
    APPLICANT: Stern, David M.
    APPLICANT: Clauss, Matthias
    APPLICANT: Kao, Janet
    APPLICANT: Kayton, Mark
    APPLICANT: Libutti, Steven K
    TITLE OF INVENTION: Endothelial Monocyte Activating
    TITLE OF INVENTION: Polypeptide II: A Mediator Which Activates Host
Response
    NUMBER OF SEQUENCES:
    CORRESPONDENCE ADDRESS:
     ADDRESSEE: Cooper & Dunham, LLP
      STREET: 1185 Avenue of the Americas
     CITY: New York
     STATE: New York
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COUNTRY: USA
       ZIP: 10036
     COMPUTER READABLE FORM:
       MEDIUM TYPE: Floppy disk
       COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
       SOFTWARE: PatentIn Release #1.30, Version #1.30
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/360,821B
       FILING DATE: 08-OCT-96
      CLASSIFICATION: 435
   ATTORNEY/AGENT INFORMATION:
      NAME: White, John P.
      REGISTRATION NUMBER: 28,678
      REFERENCE/DOCKET NUMBER: 41735-A-PCT-US
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 212-278-0400
       TELEFAX: 212-391-0525
  INFORMATION FOR SEQ ID NO: 18:
   SEQUENCE CHARACTERISTICS:
      LENGTH: 6 amino acids
      TYPE: amino acid
      STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: Peptide
US-08-360-821B-18
 Query Match
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 Matches
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Qу
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RESULT 11
US-09-177-249-50
; Sequence 50, Application US/09177249
; Patent No. 6229064
; GENERAL INFORMATION:
; APPLICANT: Fischer, Robert L.
  APPLICANT: Ohad, Nir
; APPLICANT: Kiyosue, Tomohiro
; APPLICANT: Yadegari, Ramin
; APPLICANT: Margossian, Linda
  APPLICANT: Harada, John
 APPLICANT: Goldberg, Robert B.
  APPLICANT: The Regents of the University of California
  TITLE OF INVENTION: Nucleic Acids That Control Seed and Fruit
  TITLE OF INVENTION: Development in Plants
  FILE REFERENCE: 023070-086120US
  CURRENT APPLICATION NUMBER: US/09/177,249
  CURRENT FILING DATE: 1998-10-22
  EARLIER APPLICATION NUMBER: US 09/071,838
  EARLIER FILING DATE: 1998-05-01
; NUMBER OF SEQ ID NOS: 324
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    ORGANISM: Arabidopsis sp.
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QУ
              Db
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RESULT 12
US-09-155-613A-92
; Sequence 92, Application US/09155613A
; Patent No. 6420120
; GENERAL INFORMATION:
; APPLICANT: Boulanger, Pierre
; APPLICANT: Hong, Saw See
  APPLICANT: Karayan, Lucie
  TITLE OF INVENTION: Use of a Polypeptide as Cell Receptor for Adenoviruses
  FILE REFERENCE: 032751-036
  CURRENT APPLICATION NUMBER: US/09/155,613A
  CURRENT FILING DATE: 1998-09-30
  PRIOR APPLICATION NUMBER: PCT/FR98/00184
  PRIOR FILING DATE: 1998-01-30
  PRIOR APPLICATION NUMBER: FR 97/01005
  PRIOR FILING DATE: 1997-01-30
; PRIOR APPLICATION NUMBER: FR 97/11166
  PRIOR FILING DATE: 1997-09-09
  NUMBER OF SEQ ID NOS: 98
  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 92
   LENGTH: 6
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: Phagotope
US-09-155-613A-92
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                                                                           0;
           2 SRL 4
Qу
             +111
Db
           1 SRL 3
RESULT 13
US-08-651-650-10
; Sequence 10, Application US/08651650
; Patent No. 6436903
```

```
GENERAL INFORMATION:
    APPLICANT: CLAYBERGER, Carol A.
    APPLICANT: KRENSKY, Alan M.
    TITLE OF INVENTION: IMMUNOMODULATING COMPOUNDS COMPRISING
    TITLE OF INVENTION: D-ISOMERS OF AMINO ACIDS
    NUMBER OF SEQUENCES: 38
    CORRESPONDENCE ADDRESS:
    ADDRESSEE: MORRISON & FOERSTER
     STREET: 2000 PENNSYLVANIA AVENUE, NW
     CITY: WASHINGTON
     STATE: DC
     COUNTRY: USA
     ZIP: 20006-1888
   COMPUTER READABLE FORM:
    MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.30
   CURRENT APPLICATION DATA:
     APPLICATION NUMBER: US/08/651,650
      FILING DATE: 22-MAY-1996
      CLASSIFICATION: 536
   ATTORNEY/AGENT INFORMATION:
     NAME: MURASHIGE, KATE H.
      REGISTRATION NUMBER: 29,959
     REFERENCE/DOCKET NUMBER: 28600-20203.00
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (202) 887-1500
      TELEFAX: (202) 822-0168
      TELEX: 90-4030
  INFORMATION FOR SEQ ID NO: 10:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 6 amino acids
      TYPE: amino acid
      STRANDEDNESS: single
      TOPOLOGY: linear
    FEATURE:
      NAME/KEY: Modified-site
      LOCATION: 4
      OTHER INFORMATION: /note= "D-Leu"
US-08-651-650-10
                        60.0%; Score 3; DB 4; Length 6;
 Query Match
 Best Local Similarity 100.0%; Pred. No. 2.5e+05;
         3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                        0;
           2 SRL 4
Qу
            Db
           1 SRL 3
RESULT 14
US-09-104-337A-494
; Sequence 494, Application US/09104337A
; Patent No. 6492160
   GENERAL INFORMATION:
        APPLICANT: Winter, Gregory Paul
```

```
Griffiths, Andrew David
                     Williams, Samuel Cameron
                     Waterhouse, Peter
                     Nissim, Ahuva
                     Johnson, Kevin Stuart
                     Smith, Andrew John Hammond
         TITLE OF INVENTION: Methods for producing members of specific
                              binding pairs
         NUMBER OF SEQUENCES: 600
         CORRESPONDENCE ADDRESS:
              ADDRESSEE: Audrey L. Bartnicki
              STREET: Marshall, Gerstein & Borun
                       6300 Sears Tower, 233 South Wacker Drive
              CITY: Chicago
              STATE: Illinois
              COUNTRY: USA
              ZIP: 60606-6402
         COMPUTER READABLE FORM:
              MEDIUM TYPE: Floppy disk
              COMPUTER: IBM PC compatible
              OPERATING SYSTEM: PC-DOS/MS-DOS
              SOFTWARE: PatentIn Release #1.0, Version #1.25 (EPO)
        CURRENT APPLICATION DATA:
              APPLICATION NUMBER: US/09/104,337A
              FILING DATE: 25-Jun-1998
         PRIOR APPLICATION DATA:
              APPLICATION NUMBER: US 08/350,260
              FILING DATE: 05-DEC-1994
              APPLICATION NUMBER: GB 9110549.4
              FILING DATE: 15-MAY-1991
              APPLICATION NUMBER: GB 9206318.9
              FILING DATE: 24-MAR-1992
              APPLICATION NUMBER: PCT/GB92/00883
              FILING DATE: 15-MAY-1992
              APPLICATION NUMBER: PCT/GB93/00605
              FILING DATE: 24-MAR-1993
              APPLICATION NUMBER: US 08/150,002
              FILING DATE: 31-MAR-1994
              APPLICATION NUMBER: US 08/307,619
              FILING DATE: 16-SEP-1994
        ATTORNEY/AGENT INFORMATION:
              NAME: Bartnicki, Audrey L.
              REGISTRATION NUMBER: 40,499
              REFERENCE/DOCKET NUMBER: 28111/32372A
         TELECOMMUNICATION INFORMATION:
              TELEPHONE: 312-474-6300
   INFORMATION FOR SEQ ID NO: 494:
         SEQUENCE CHARACTERISTICS:
              LENGTH: 6 amino acids
              TYPE: amino acid
              STRANDEDNESS: single
              TOPOLOGY: linear
         SEQUENCE DESCRIPTION: SEQ ID NO: 494:
US-09-104-337A-494
  Query Match
                         60.0%; Score 3; DB 4; Length 6;
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
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Matches 3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                         0;
            2 SRL 4
Qу
              Db
            4 SRL 6
RESULT 15
US-08-526-710-19
; Sequence 19, Application US/08526710
; Patent No. 5622699
   GENERAL INFORMATION:
     APPLICANT: Ruoslahti, Erkki
     APPLICANT: Pasqualini, Renata
     TITLE OF INVENTION: Method of Identifying Molecules That
     TITLE OF INVENTION: Home to a Selected Organ In Vivo
     NUMBER OF SEQUENCES: 44
     CORRESPONDENCE ADDRESS:
      ADDRESSEE: Campbell and Flores
      STREET: 4370 La Jolla Village Drive, Suite 700
      CITY: San Diego
      STATE: California
     COUNTRY: United States
       ZIP: 92122
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
       COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
       SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/526,710
      FILING DATE: 11-SEP-1995
      CLASSIFICATION: 435
    ATTORNEY/AGENT INFORMATION:
      NAME: Campbell, Cathryn A.
      REGISTRATION NUMBER: 31,815
      REFERENCE/DOCKET NUMBER: P-LJ 1779
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (619) 535-9001
      TELEFAX: (619) 535-8949
   INFORMATION FOR SEQ ID NO: 19:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 7 amino acids
      TYPE: amino acid
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-08-526-710-19
 Query Match
                         60.0%; Score 3; DB 1; Length 7;
 Best Local Similarity
                        100.0%; Pred. No. 2.5e+05;
           3; Conservative 0; Mismatches 0; Indels
 Matches
                                                              0; Gaps
                                                                          0;
           2 SRL 4
Qу
             +
Db
           3 SRL 5
```

```
RESULT 16
US-08-137-117D-118
 ; Sequence 118, Application US/08137117D
 ; Patent No. 5795965
   GENERAL INFORMATION:
     APPLICANT: TSUCHIYA, Masayuki
     APPLICANT: SATO, Koh
     APPLICANT: BENDIG, Mary
     APPLICANT: JONES, Steven
     APPLICANT: SALDANHA, Jose
     TITLE OF INVENTION: RESHAPED HUMAN ANTIBODY TO HUMAN
     TITLE OF INVENTION: INTERLEUKIN-6 RECEPTOR
    NUMBER OF SEQUENCES: 158
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Foley & Lardner
      STREET: 3000 K Street, N.W., Suite 500
      CITY: Washington
      STATE: D.C.
      COUNTRY: USA
       ZIP: 20007-5109
    COMPUTER READABLE FORM:
       MEDIUM TYPE: Floppy disk
       COMPUTER: IBM PC compatible
       OPERATING SYSTEM: PC-DOS/MS-DOS
       SOFTWARE: PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/137,117D
       FILING DATE: 20-DEC-1993
      CLASSIFICATION: 530
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: WO PCT/JP92/00544
       FILING DATE: 24-APR-1992
     PRIOR APPLICATION DATA:
      APPLICATION NUMBER: JP 4-32084
      FILING DATE: 19-FEB-1992
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: JP 3-95476
      FILING DATE: 25-APR-1991
   ATTORNEY/AGENT INFORMATION:
     NAME: WEGNER, Harold C.
      REGISTRATION NUMBER: 25,258
      REFERENCE/DOCKET NUMBER: 53466/126/AAOK
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (202)672-5300
      TELEFAX: (202)672-5399
      TELEX: 904136
   INFORMATION FOR SEQ ID NO: 118:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 7 amino acids
      TYPE: amino acid
      STRANDEDNESS: single
    TOPOLOGY: linear
US-08-137-117D-118
 Query Match
                        60.0%; Score 3; DB 1; Length 7;
 Best Local Similarity 100.0%; Pred. No. 2.5e+05;
 Matches 3; Conservative 0; Mismatches 0; Indels 0; Gaps
```

```
2 SRL 4
QУ
             111
           3 SRL 5
Db
RESULT 17
US-08-480-434-78
; Sequence 78, Application US/08480434
; Patent No. 5811248
  GENERAL INFORMATION:
    APPLICANT: Charles C. Ditlow, et al.
    TITLE OF INVENTION: ATHEROSCLEROTIC PLAQUE SPECIFIC ANTIGENS,
    TITLE OF INVENTION: ANTIBODIES THERETO, AND USES THEREOF
    NUMBER OF SEQUENCES: 88
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Pennie & Edmonds
      STREET: 1155 Avenue of the Americas
      CITY: New York
      STATE: New York
      COUNTRY: U.S.A.
       ZIP: 10036
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.24
     CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/480,434
      FILING DATE: 07-JUN-1995
      CLASSIFICATION: 435
    ATTORNEY/AGENT INFORMATION:
      NAME: Albert P. Halluin
      REGISTRATION NUMBER: 25,227
      REFERENCE/DOCKET NUMBER: 7606-053
     TELECOMMUNICATION INFORMATION:
      TELEPHONE: (415) 854-3660
      TELEFAX: (415) 854-3694
       TELEX: 66141 PENNIE
   INFORMATION FOR SEQ ID NO:
     SEQUENCE CHARACTERISTICS:
      LENGTH: 7 amino acids
      TYPE: amino acid
      STRANDEDNESS: unknown
      TOPOLOGY: unknown
    MOLECULE TYPE: DNA (genomic)
    HYPOTHETICAL: N
    ANTI-SENSE:
US-08-480-434-78
  Query Match
                         60.0%; Score 3; DB 2; Length 7;
  Best Local Similarity
                         100.0%; Pred. No. 2.5e+05;
 Matches
            3; Conservative 0; Mismatches 0; Indels
                                                                0;
                                                                    Gaps
                                                                            0;
            2 SRL 4
Qу
              \mathbf{I}
Db
            3 SRL 5
```

```
RESULT 18
US-08-436-717-118
; Sequence 118, Application US/08436717
; Patent No. 5817790
  GENERAL INFORMATION:
    APPLICANT: TSUCHIYA, Masayuki
    APPLICANT: SATO, Koh
    APPLICANT: BENDIG, Mary
    APPLICANT: JONES, Steven
    APPLICANT: SALDANHA, Jose
    TITLE OF INVENTION: RESHAPED HUMAN ANTIBODY TO HUMAN
    TITLE OF INVENTION: INTERLEUKIN-6 RECEPTOR
    NUMBER OF SEQUENCES: 158
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Foley & Lardner
      STREET: 3000 K Street, N.W., Suite 500
      CITY: Washington
      STATE: D.C.
      COUNTRY: USA
      ZIP: 20007-5109
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.30
     CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/436,717
      FILING DATE:
      CLASSIFICATION: 536
     PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US/08/137,117
      FILING DATE: 20-DEC-1993
      APPLICATION NUMBER: WO PCT/JP92/00544
      FILING DATE: 24-APR-1992
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: JP 4-32084
      FILING DATE: 19-FEB-1992
     PRIOR APPLICATION DATA:
      APPLICATION NUMBER: JP 3-95476
      FILING DATE: 25-APR-1991
    ATTORNEY/AGENT INFORMATION:
      NAME: WEGNER, Harold C.
      REGISTRATION NUMBER: 25,258
      REFERENCE/DOCKET NUMBER: 53466/126/AAOK
     TELECOMMUNICATION INFORMATION:
       TELEPHONE: (202)672-5300
       TELEFAX: (202)672-5399
       TELEX: 904136
   INFORMATION FOR SEQ ID NO: 118:
     SEQUENCE CHARACTERISTICS:
      LENGTH: 7 amino acids
       TYPE: amino acid
      STRANDEDNESS: single
       TOPOLOGY: linear
US-08-436-717-118
```

```
Query Match
                        60.0%; Score 3; DB 2; Length 7;
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
 Matches
           3; Conservative 0; Mismatches 0; Indels
                                                            0; Gaps
                                                                          0;
           2 SRL 4
Qу
             +111
           3 SRL 5
Db
RESULT 19
US-08-053-451B-78
; Sequence 78, Application US/08053451B
; Patent No. 5955584
; GENERAL INFORMATION:
    APPLICANT: Chen, Francis W.
    APPLICANT: Ditlow, Charles C.
    APPLICANT: Calenoff, Emanuel
    TITLE OF INVENTION: ATHEROSCLEROTIC PLAQUE SPECIFIC
    TITLE OF INVENTION: ANTIGENS, ANTIBODIES THERETO, AND USES THEREOF
    NUMBER OF SEQUENCES: 176
    CORRESPONDENCE ADDRESS:
     ADDRESSEE: Pennie & Edmonds
      STREET: 1155 Avenue of the Americas
      CITY: New York
      STATE: New York
      COUNTRY: USA
     ZIP: 10036
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/053,451B
      FILING DATE: 26-APR-1993
      CLASSIFICATION: 424
    ATTORNEY/AGENT INFORMATION:
     NAME: Halluin, Albert P.
      REGISTRATION NUMBER: 25,227
     REFERENCE/DOCKET NUMBER: 7606-033-999
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 415-854-3660
      TELEFAX: 415-854-3694
      TELEX: 66141 PENNIE
  INFORMATION FOR SEQ ID NO:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 7 amino acids
      TYPE: amino acid
      STRANDEDNESS: unknown
      TOPOLOGY: unknown
    MOLECULE TYPE: DNA
    HYPOTHETICAL: N
    ANTI-SENSE: N
US-08-053-451B-78
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60.0%; Score 3; DB 2; Length 7;

Query Match

```
Best Local Similarity 100.0%; Pred. No. 2.5e+05;
  Matches
           3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                            0;
Qу
            2 SRL 4
              111
Db
            3 SRL 5
RESULT 20
US-08-836-561-44
; Sequence 44, Application US/08836561
; Patent No. 6018032
; GENERAL INFORMATION:
    APPLICANT: KOIKE, Masamichi
    APPLICANT: FURUYA, Akiko
    APPLICANT: NAKAMURA, Kazuyasu
    APPLICANT: IIDA, Akihiro
APPLICANT: ANAZAWA, Hideharu
    APPLICANT: HANAI, No. 6018032uo
    APPLICANT: TAKATSU, Kiyoshi
    TITLE OF INVENTION: Antibody Against Human Interleukin-5
    TITLE OF INVENTION: Receptor Alpha Chain
    NUMBER OF SEQUENCES: 106
   CORRESPONDENCE ADDRESS:
     ADDRESSEE: Pennie & Edmonds LLP
      STREET: 1155 Avenue of the Americas
      CITY: New York
     STATE: NY
     COUNTRY: USA
     ZIP: 10036
   COMPUTER READABLE FORM:
     MEDIUM TYPE: Diskette
      COMPUTER: IBM Compatible
      OPERATING SYSTEM: DOS
      SOFTWARE: FastSEQ Version 2.0
   CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/836,561
      FILING DATE: 09-MAY-1997
      CLASSIFICATION: 424
   PRIOR APPLICATION DATA:
      APPLICATION NUMBER: JP 232384/95
      FILING DATE: 11-SEP-1995
    ATTORNEY/AGENT INFORMATION:
      NAME: Lawrence, III, Stanton T
      REGISTRATION NUMBER: 25,736
      REFERENCE/DOCKET NUMBER: 7005-115-999
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 212-790-9090
      TELEFAX: 212-869-9741
      TELEX: 66141 PENNIE
  INFORMATION FOR SEQ ID NO:
   SEQUENCE CHARACTERISTICS:
      LENGTH: 7 amino acids
      TYPE: amino acid
      STRANDEDNESS: single
     TOPOLOGY: linear
   MOLECULE TYPE: peptide
```

```
60.0%; Score 3; DB 3; Length 7;
 Query Match
 Best Local Similarity 100.0%; Pred. No. 2.5e+05;
          3; Conservative 0; Mismatches 0; Indels 0; Gaps
 Matches
                                                                         0;
           2 SRL 4
QУ
             Db
           3 SRL 5
RESULT 21
US-08-328-239A-6
; Sequence 6, Application US/08328239A
; Patent No. 6037136
  GENERAL INFORMATION:
    APPLICANT: Beach, David H.
    APPLICANT: Galationov, Konstantin
    APPLICANT: Jessus, Catherine
    TITLE OF INVENTION: Interactions between Raf Proto-Oncogenes
    TITLE OF INVENTION: and CDC25 Phosphatases, and Uses Related Thereto
    NUMBER OF SEQUENCES: 6
    CORRESPONDENCE ADDRESS:
     ADDRESSEE: FOLEY, HOAG & ELIOT
     STREET: One Post Office Square
      CITY: Boston
      STATE: MA
      COUNTRY: USA
      ZIP: 02109
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: ASCII (Text)
    CURRENT APPLICATION DATA:
     APPLICATION NUMBER: US/08/328,239A
      FILING DATE:
      CLASSIFICATION: 435
    ATTORNEY/AGENT INFORMATION:
      NAME: Vincent, Matthew P.
      REGISTRATION NUMBER: 36,709
      REFERENCE/DOCKET NUMBER: CSV002.01
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (617) 832-1000
      TELEFAX: (617) 832-7000
  INFORMATION FOR SEQ ID NO: 6:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 7 amino acids
      TYPE: amino acid
      STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-08-328-239A-6
                         60.0%; Score 3; DB 3; Length 7;
 Query Match
 Best Local Similarity 100.0%; Pred. No. 2.5e+05;
 Matches 3; Conservative 0; Mismatches 0; Indels 0; Gaps
```

```
2 SRL 4
Qу
             2 SRL 4
Db
RESULT 22
US-08-862-855-19
; Sequence 19, Application US/08862855
; Patent No. 6068829
  GENERAL INFORMATION:
    APPLICANT: Ruoslahti, Erkki
    APPLICANT: Pasqualini, Renata
    TITLE OF INVENTION: Method of Identifying Molecules That
    TITLE OF INVENTION: Home to a Selected Organ In Vivo
    NUMBER OF SEQUENCES: 44
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Campbell & Flores LLP
      STREET: 4370 La Jolla Village Drive, Suite 700
      CITY: San Diego
      STATE: California
      COUNTRY: United States
      ZIP: 92122
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
     APPLICATION NUMBER: US/08/862,855
     FILING DATE:
      CLASSIFICATION: 424
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 08/526,710
      FILING DATE: 11-SEP-1995
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 08/813,273
      FILING DATE: 10-MAR-1997
    ATTORNEY/AGENT INFORMATION:
      NAME: Campbell, Cathryn A.
      REGISTRATION NUMBER: 31,815
      REFERENCE/DOCKET NUMBER: P-LJ 2621
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (619) 535-9001
      TELEFAX: (619) 535-8949
  INFORMATION FOR SEQ ID NO: 19:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 7 amino acids
      TYPE: amino acid
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-08-862-855-19
  Ouery Match
                         60.0%; Score 3; DB 3; Length 7;
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
          3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                           0;
```

```
2 SRL 4
Qу
             Db
          3 SRL 5
RESULT 23
US-08-649-100-13
; Sequence 13, Application US/08649100
; Patent No. 6114507
  GENERAL INFORMATION:
    APPLICANT: SHIRAKAWA, KAMON
    APPLICANT: MATUSUE, TOMOKAZU
    APPLICANT: NAGATA, SHIGEKAZU
    APPLICANT: CO, MAN SUNG
    APPLICANT: VASQUEZ, MAXIMILIANO
    TITLE OF INVENTION: ANTI-FAS LIGAND ANTIBODY AND ASSAY
    TITLE OF INVENTION: METHOD USING THE ANTI-FAS LIGAND ANTIBODY
    NUMBER OF SEQUENCES: 41
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: BIRCH, STEWART, KOLASCH AND BIRCH
      STREET: PO BOX 747
      CITY: FALLS CHURCH
      STATE: VA
      COUNTRY: USA
      ZIP: 22040-0747
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/649,100
      FILING DATE:
      CLASSIFICATION: 435
    ATTORNEY/AGENT INFORMATION:
      NAME: MURPHY JR, GERALD M
      REGISTRATION NUMBER: 28,977
      REFERENCE/DOCKET NUMBER: 1110-160
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (703) 205-8000
      TELEFAX: (703) 205-8050
  INFORMATION FOR SEQ ID NO: 13:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 7 amino acids
      TYPE: amino acid
      STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-08-649-100-13
 Query Match
                         60.0%; Score 3; DB 3; Length 7;
 Best Local Similarity 100.0%; Pred. No. 2.5e+05;
 Matches
          3; Conservative 0; Mismatches 0; Indels
Qу
           2 SRL 4
              \Pi
Db
           3 SRL 5
```

```
RESULT 24
US-08-649-100-29
; Sequence 29, Application US/08649100
; Patent No. 6114507
   GENERAL INFORMATION:
     APPLICANT: SHIRAKAWA, KAMON
     APPLICANT: MATUSUE, TOMOKAZU
     APPLICANT: NAGATA, SHIGEKAZU
     APPLICANT: CO, MAN SUNG
     APPLICANT: VASQUEZ, MAXIMILIANO
     TITLE OF INVENTION: ANTI-FAS LIGAND ANTIBODY AND ASSAY
     TITLE OF INVENTION: METHOD USING THE ANTI-FAS LIGAND ANTIBODY
     NUMBER OF SEQUENCES: 41
     CORRESPONDENCE ADDRESS:
       ADDRESSEE: BIRCH, STEWART, KOLASCH AND BIRCH
       STREET: PO BOX 747
      CITY: FALLS CHURCH
      STATE: VA
       COUNTRY: USA
       ZIP: 22040-0747
    COMPUTER READABLE FORM:
       MEDIUM TYPE: Floppy disk
       COMPUTER: IBM PC compatible
       OPERATING SYSTEM: PC-DOS/MS-DOS
       SOFTWARE: PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
       APPLICATION NUMBER: US/08/649,100
       FILING DATE:
       CLASSIFICATION: 435
    ATTORNEY/AGENT INFORMATION:
       NAME: MURPHY JR, GERALD M
       REGISTRATION NUMBER: 28,977
       REFERENCE/DOCKET NUMBER: 1110-160
    TELECOMMUNICATION INFORMATION:
       TELEPHONE: (703) 205-8000
       TELEFAX: (703) 205-8050
   INFORMATION FOR SEQ ID NO: 29:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 7 amino acids
      TYPE: amino acid
       STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: DNA (genomic)
US-08-649-100-29
  Query Match
                         60.0%; Score 3; DB 3; Length 7;
 Best Local Similarity
                         100.0%; Pred. No. 2.5e+05;
           3; Conservative 0; Mismatches 0; Indels 0; Gaps
 Matches
                                                                           0;
Qу
           2 SRL 4
             Db
           3 SRL 5
```

```
US-09-258-754-10
; Sequence 10, Application US/09258754
; Patent No. 6174687
; GENERAL INFORMATION:
  APPLICANT: Ruoslahti, Erkki
; APPLICANT: Pasqualini, Renata
; APPLICANT: Rajotte, Daniel
  TITLE OF INVENTION: Methods of Identifying Lung Homing Molecules Using
  TITLE OF INVENTION: Membrane Dipeptidase
; FILE REFERENCE: P-LJ 3443
  CURRENT APPLICATION NUMBER: US/09/258,754
; CURRENT FILING DATE: 1999-02-26
; EARLIER APPLICATION NUMBER: 09/042.107
; EARLIER FILING DATE: 1998-03-13
; NUMBER OF SEQ ID NOS: 452
  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 10
    LENGTH: 7
    TYPE: PRT
    ORGANISM: Artificial Sequence
    OTHER INFORMATION: Description of Artificial Sequence: Synthetic
US-09-258-754-10
  Query Match
                          60.0%; Score 3; DB 3; Length 7;
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
  Matches
            3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
Qу
            2 SRL 4
              111
Db
            4 SRL 6
RESULT 26
US-09-258-754-170
; Sequence 170, Application US/09258754
; Patent No. 6174687
; GENERAL INFORMATION:
; APPLICANT: Ruoslahti, Erkki
  APPLICANT: Pasqualini, Renata
  APPLICANT: Rajotte, Daniel
  TITLE OF INVENTION: Methods of Identifying Lung Homing Molecules Using
  TITLE OF INVENTION: Membrane Dipeptidase
  FILE REFERENCE: P-LJ 3443
  CURRENT APPLICATION NUMBER: US/09/258,754
  CURRENT FILING DATE: 1999-02-26
  EARLIER APPLICATION NUMBER: 09/042,107
  EARLIER FILING DATE: 1998-03-13
; NUMBER OF SEQ ID NOS: 452
  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 170
   LENGTH: 7
   TYPE: PRT
   ORGANISM: Artificial Sequence
   OTHER INFORMATION: Description of Artificial Sequence: Synthetic
US-09-258-754-170
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Query Match
                         60.0%; Score 3; DB 3; Length 7;
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
           3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                         0;
            2 SRL 4
Qу
             1 SRL 3
RESULT 27
US-09-042-107-10
; Sequence 10, Application US/09042107
; Patent No. 6232287
; GENERAL INFORMATION:
  APPLICANT: Ruoslahti, Erkki
  APPLICANT: Pasqualini, Renata
; TITLE OF INVENTION: Molecules that Home to Various Selected Organs or
; TITLE OF INVENTION: Tissues
; FILE REFERENCE: P-LJ 2892
; CURRENT APPLICATION NUMBER: US/09/042,107
; CURRENT FILING DATE: 1998-03-13
; NUMBER OF SEQ ID NOS: 436
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 10
  LENGTH: 7
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: Description of Artificial Sequence: Synthetic
US-09-042-107-10
 Query Match
                         60.0%; Score 3; DB 3; Length 7;
 Best Local Similarity 100.0%; Pred. No. 2.5e+05;
 Matches
          3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                          0;
           2 SRL 4
Qу
             Db
           4 SRL 6
RESULT 28
US-09-042-107-170
; Sequence 170, Application US/09042107
; Patent No. 6232287
; GENERAL INFORMATION:
; APPLICANT: Ruoslahti, Erkki
; APPLICANT: Pasqualini, Renata
 TITLE OF INVENTION: Molecules that Home to Various Selected Organs or
  TITLE OF INVENTION: Tissues
; FILE REFERENCE: P-LJ 2892
; CURRENT APPLICATION NUMBER: US/09/042,107
; CURRENT FILING DATE: 1998-03-13
; NUMBER OF SEQ ID NOS: 436
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 170
: LENGTH: 7
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TYPE: PRT
    ORGANISM: Artificial Sequence
    FEATURE:
   OTHER INFORMATION: Description of Artificial Sequence: Synthetic
US-09-042-107-170
  Ouery Match
                           60.0%; Score 3; DB 3; Length 7;
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
  Matches
            3; Conservative 0; Mismatches 0; Indels 0; Gaps
Qу
            2 SRL 4
              Db
            1 SRL 3
RESULT 29
US-09-461-697-330
; Sequence 330, Application US/09461697
; Patent No. 6277974
; GENERAL INFORMATION:
; APPLICANT: COGENT NEUROSCIENCE, Inc.
; APPLICANT: Lo, Donald C.
; APPLICANT: Barney, Shawn
; APPLICANT: Thomas, Mary Beth
; APPLICANT: Portbury, Stuart D.
; APPLICANT: Puranam, Kasturi
; APPLICANT: Katz, Lawrence C.
  TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR DIAGNOSING
  TITLE OF INVENTION: AND TREATING CONDITIONS, DISORDERS, OR DISEASES INVOLVING
  TITLE OF INVENTION: CELL DEATH
; FILE REFERENCE: 10001-005-999
; CURRENT APPLICATION NUMBER: US/09/461,697
; CURRENT FILING DATE: 1999-12-14
; NUMBER OF SEQ ID NOS: 466
  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 330
  LENGTH: 7
   TYPE: PRT
  ORGANISM: Homo sapiens
US-09-461-697-330
  Query Match
                          60.0%; Score 3; DB 3; Length 7;
  Query Match 60.0%; Score 3; DB 3; Der Best Local Similarity 100.0%; Pred. No. 2.5e+05;
 Matches
           3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                              0;
Qу
            2 SRL 4
              \perp \downarrow \downarrow \downarrow
           4 SRL 6
RESULT 30
US-09-226-985-19
; Sequence 19, Application US/09226985
; Patent No. 6296832
; GENERAL INFORMATION:
    APPLICANT: Ruoslahti, Erkki
    APPLICANT: Pasqualini, Renata
```

```
TITLE OF INVENTION: Molecules That Home to a Selected Organ In Vivo
     NUMBER OF SEQUENCES: 44
     CORRESPONDENCE ADDRESS:
      ADDRESSEE: Campbell & Flores LLP
       STREET: 4370 La Jolla Village Drive, Suite 700
      CITY: San Diego
      STATE: California
     COUNTRY: United States
      ZIP: 92122
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
       COMPUTER: IBM PC compatible
       OPERATING SYSTEM: PC-DOS/MS-DOS
       SOFTWARE: PatentIn Release #1.0, Version #1.25
     CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/09/226,985
       FILING DATE:
      CLASSIFICATION:
    PRIOR APPLICATION DATA:
     APPLICATION NUMBER: US 08/526,710
      FILING DATE: 11-SEP-1995
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 08/813,273
      FILING DATE: 10-MAR-1997
   PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 08/862,855
      FILING DATE: 23-MAY-1997
    ATTORNEY/AGENT INFORMATION:
      NAME: Campbell, Cathryn A.
      REGISTRATION NUMBER: 31,815
      REFERENCE/DOCKET NUMBER: P-LJ 3423
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (619) 535-9001
      TELEFAX: (619) 535-8949
  INFORMATION FOR SEO ID NO: 19:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 7 amino acids
      TYPE: amino acid
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-09-226-985-19
  Query Match
                         60.0%; Score 3; DB 3; Length 7;
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
 Matches 3; Conservative 0; Mismatches 0; Indels
                                                               0; Gaps
                                                                           0;
           2 SRL 4
Qу
             Db
           3 SRL 5
RESULT 31
US-09-227-906-19
; Sequence 19, Application US/09227906
; Patent No. 6306365
; GENERAL INFORMATION:
; APPLICANT: Ruoslahti, Erkki
```

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APPLICANT: Pasqualini, Renata
     TITLE OF INVENTION: Method of Identifying Molecules That
     TITLE OF INVENTION: Home to a Selected Organ In Vivo
     NUMBER OF SEQUENCES: 44
     CORRESPONDENCE ADDRESS:
      ADDRESSEE: Campbell & Flores LLP
      STREET: 4370 La Jolla Village Drive, Suite 700
      CITY: San Diego
       STATE: California
       COUNTRY: United States
       ZIP: 92122
    COMPUTER READABLE FORM:
       MEDIUM TYPE: Floppy disk
       COMPUTER: IBM PC compatible
       OPERATING SYSTEM: PC-DOS/MS-DOS
       SOFTWARE: PatentIn Release #1.0, Version #1.25
     CURRENT APPLICATION DATA:
       APPLICATION NUMBER: US/09/227,906
       FILING DATE:
       CLASSIFICATION:
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 08/526,710
       FILING DATE: 11-SEP-1995
     PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 08/813,273
       FILING DATE: 10-MAR-1997
     PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 08/862,855
       FILING DATE: 23-MAY-1997
     ATTORNEY/AGENT INFORMATION:
       NAME: Campbell, Cathryn A.
       REGISTRATION NUMBER: 31,815
       REFERENCE/DOCKET NUMBER: P-LJ 3424
     TELECOMMUNICATION INFORMATION:
       TELEPHONE: (619) 535-9001
       TELEFAX: (619) 535-8949
   INFORMATION FOR SEQ ID NO: 19:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 7 amino acids
      TYPE: amino acid
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-09-227-906-19
  Query Match
                         60.0%; Score 3; DB 4; Length 7;
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
 Matches
           3; Conservative 0; Mismatches 0; Indels
                                                               0; Gaps
                                                                           0;
Qу
           2 SRL 4
             Db
           3 SRL 5
RESULT 32
US-09-434-122-44
; Sequence 44, Application US/09434122
; Patent No. 6538111
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GENERAL INFORMATION:
         APPLICANT: KOIKE, Masamichi
                     FURUYA, Akiko
                    NAKAMURA, Kazuyasu
                    IIDA, Akihiro
                    ANAZAWA, Hideharu
                    HANAI, No. 6538111uo
                    TAKATSU, Kiyoshi
         TITLE OF INVENTION: Antibody Against Human Interleukin-5
                             Receptor Alpha Chain
         NUMBER OF SEQUENCES: 106
         CORRESPONDENCE ADDRESS:
              ADDRESSEE: Pennie & Edmonds LLP
              STREET: 1155 Avenue of the Americas
              CITY: New York
              STATE: NY
              COUNTRY: USA
              ZIP: 10036
        COMPUTER READABLE FORM:
              MEDIUM TYPE: Diskette
              COMPUTER: IBM Compatible
              OPERATING SYSTEM: DOS
              SOFTWARE: FastSEO Version 2.0
         CURRENT APPLICATION DATA:
              APPLICATION NUMBER: US/09/434,122
              FILING DATE: 05-No. 6538111-1999
         PRIOR APPLICATION DATA:
              APPLICATION NUMBER: 08/836,561
              FILING DATE: 09-MAY-1997
              APPLICATION NUMBER: JP 232384/95
              FILING DATE: 11-SEP-1995
         ATTORNEY/AGENT INFORMATION:
              NAME: Lawrence, III, Stanton T
              REGISTRATION NUMBER: 25,736
              REFERENCE/DOCKET NUMBER: 7005-115-999
         TELECOMMUNICATION INFORMATION:
              TELEPHONE: 212-790-9090
              TELEFAX: 212-869-9741
              TELEX: 66141 PENNIE
   INFORMATION FOR SEQ ID NO: 44:
         SEQUENCE CHARACTERISTICS:
              LENGTH: 7 amino acids
              TYPE: amino acid
              STRANDEDNESS: single
              TOPOLOGY: linear
         MOLECULE TYPE: peptide
         SEQUENCE DESCRIPTION: SEQ ID NO: 44:
US-09-434-122-44
  Query Match
                          60.0%; Score 3; DB 4; Length 7;
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
  Matches
          3; Conservative 0; Mismatches 0; Indels 0; Gaps
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Oy
            2 SRI 4
              ++1
Db
            3 SRL 5
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RESULT 33
US-07-834-848-14
; Sequence 14, Application US/07834848
; Patent No. 5436221
  GENERAL INFORMATION:
     APPLICANT: KITAGUCHI, HIROSHI
     APPLICANT: KOMAZAWA, HIROYUKI
    APPLICANT: KOJIMA, MASAYOSHI
    APPLICANT: MORI, HIDETO
    APPLICANT: NISHIKAWA, NAOYUKI
     APPLICANT: SATOH, HIDEAKI
     APPLICANT: ORIKASA, ATSUSHI
     APPLICANT: ONO, MITSUNORI
     APPLICANT: AZUMA, ICHIRO
     APPLICANT: SAIKI, IKUO
     TITLE OF INVENTION: PEPTIDE DERIVATIVES AND APPLICATION
    TITLE OF INVENTION: THEREOF
    NUMBER OF SEQUENCES: 18
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Sughrue, Mion, Zinn, Macpeak, & Seas
       STREET: 2100 Pennsylvania Ave., NW
      CITY: Washington
      STATE: DC
      COUNTRY: USA
      ZIP: 20037-3202
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
       COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/07/834,848
      FILING DATE: 19920213
      CLASSIFICATION: 514
    ATTORNEY/AGENT INFORMATION:
      NAME: Biggart, Waddell A.
      REGISTRATION NUMBER: 24,861
      REFERENCE/DOCKET NUMBER: Q28480
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (202)293-7060
      TELEFAX: (202)293-7860
      TELEX: 6491103
  INFORMATION FOR SEQ ID NO: 14:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 8 amino acids
      TYPE: AMINO ACID
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-07-834-848-14
 Query Match
                         60.0%; Score 3; DB 1; Length 8;
 Best Local Similarity 100.0%; Pred. No. 2.5e+05;
 Matches
          3; Conservative 0; Mismatches
                                               0; Indels 0; Gaps
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Db

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RESULT 34
US-08-669-284B-28
; Sequence 28, Application US/08669284B
: Patent No. 5939534
  GENERAL INFORMATION:
    APPLICANT: Inoue, Makoto
    APPLICANT: Kikuchi, Kaoru
    APPLICANT: Ishige, Yoko
    APPLICANT: Ito, Akira
    APPLICANT: Kimura, Toru
    APPLICANT: Nakayama, Chikao
    APPLICANT: No. 5939534uchi, Hiroshi
    TITLE OF INVENTION: NOVEL HUMAN CILIARY NEUROTROPHIC FACTORS
    NUMBER OF SEQUENCES: 35
    CORRESPONDENCE ADDRESS:
     ADDRESSEE: SUGHRUE, MION, ZINN, MACPEAK & SEAS
      STREET: 2100 Pennsylvania Avenue, N.W.
      CITY: Washington
      STATE: D.C.
      COUNTRY: USA
      ZIP: 20037
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/669,284B
      FILING DATE: 28-JUN-1996
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: PCT/JP94/02269
      FILING DATE: 27-DEC-1994
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: JP 06-268281
      FILING DATE: 05-OCT-1994
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: JP 06-201504
     FILING DATE: 02-AUG-1994
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: JP 05-350934
      FILING DATE: 29-DEC-1993
    ATTORNEY/AGENT INFORMATION:
      NAME: Nakamura, Dean H.
      REGISTRATION NUMBER: 33,981
      REFERENCE/DOCKET NUMBER: Q-42041
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (202)293-7060
      TELEFAX: (202)293-7860
  INFORMATION FOR SEQ ID NO:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 8 amino acids
      TYPE: amino acid
      STRANDEDNESS:
      TOPOLOGY: linear
```

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MOLECULE TYPE: peptide
US-08-669-284B-28
  Query Match
                        60.0%; Score 3; DB 2; Length 8;
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
  Matches
          3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                         0;
            2 SRL 4
Ov
             |111|
            6 SRL 8
Db
RESULT 35
US-08-482-228-27
; Sequence 27, Application US/08482228
; Patent No. 5968753
  GENERAL INFORMATION:
    APPLICANT: Tseng-Law, Janet
    APPLICANT: Kobori, Joan A.
    APPLICANT: Al-Abdaly, Fahad A.
    APPLICANT: Guillermo, Roy
    APPLICANT: Helgerson, Sam L.
    APPLICANT: Deans, Robert J.
    TITLE OF INVENTION: POSITIVE AND POSITIVE/NEGATIVE CELL
    TITLE OF INVENTION: SELECTION MEDIATED BY PEPTIDE RELEASE
    NUMBER OF SEQUENCES: 215
    CORRESPONDENCE ADDRESS:
     ADDRESSEE: Janice Guthrie, Ph.D.
     STREET: P.O. Box 15210
      CITY: Irvine
     STATE: California
     COUNTRY: USA
     ZIP: 92713-5210
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
     APPLICATION NUMBER: US/08/482,228
      FILING DATE: 07-JUN-1995
      CLASSIFICATION: 435
    ATTORNEY/AGENT INFORMATION:
      NAME: Guthrie, Janice
      REGISTRATION NUMBER: 35,170
      REFERENCE/DOCKET NUMBER: IT-4630CIP3
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (714) 440-5353
      TELEFAX: (714) 553-1952
  INFORMATION FOR SEQ ID NO: 27:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 8 amino acids
      TYPE: amino acid
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-08-482-228-27
```

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Query Match
                         60.0%; Score 3; DB 2; Length 8;
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
          3; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
  Matches
            2 SRL 4
Qу
             2 SRL 4
Db
RESULT 36
US-08-687-219B-3
; Sequence 3, Application US/08687219B
; Patent No. 5985541
  GENERAL INFORMATION:
     APPLICANT: JOLIVET-REYNAUD, Colette
     TITLE OF INVENTION: PEPTIDE CAPABLE OF BEING RECOGNIZED BY TITLE OF INVENTION: ANTIBODIES RECOGNIZING THE C33 ANTIGEN OF HEPATITIS C
VIRUS
     NUMBER OF SEQUENCES: 40
     CORRESPONDENCE ADDRESS:
      ADDRESSEE: OLIFF & BERRIDGE, PLC
       STREET: 700 South Washington Street
       CITY: Alexandria
       STATE: VA
     COUNTRY: USA
      ZIP: 22314
   COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
       COMPUTER: PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
     SOFTWARE: PatentIn Release #1.0, Version #1.30
   CURRENT APPLICATION DATA:
     APPLICATION NUMBER: US/08/687.219B
     FILING DATE: 25-JUL-1996
   PRIOR APPLICATION DATA:
      APPLICATION NUMBER: FR 95 09005
      FILING DATE: 25-JUL-1995
   ATTORNEY/AGENT INFORMATION:
     NAME: Berridge, William P.
       REGISTRATION NUMBER: 30,024
      REFERENCE/DOCKET NUMBER: WPB 38526
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 703 836-6400
       TELEFAX: 703 836-2787
   INFORMATION FOR SEO ID NO: 3:
   SEQUENCE CHARACTERISTICS:
      LENGTH: 8 amino acids
      TYPE: amino acid
     TOPOLOGY: unknown
    MOLECULE TYPE: peptide
    FRAGMENT TYPE: N-terminal or C-terminal or internal
US-08-687-219B-3
 Query Match 60.0%; Score 3; DB 2; Length 8; Best Local Similarity 100.0%; Pred. No. 2.5e+05;
 Matches 3; Conservative 0; Mismatches 0; Indels 0; Gaps
```

```
2 SRL 4
Qy
              Db
            6 SRL 8
RESULT 37
US-08-687-219B-4
; Sequence 4, Application US/08687219B
; Patent No. 5985541
  GENERAL INFORMATION:
    APPLICANT: JOLIVET-REYNAUD, Colette
     TITLE OF INVENTION: PEPTIDE CAPABLE OF BEING RECOGNIZED BY
     TITLE OF INVENTION: ANTIBODIES RECOGNIZING THE C33 ANTIGEN OF HEPATITIS C
VIRUS
    NUMBER OF SEQUENCES: 40
     CORRESPONDENCE ADDRESS:
      ADDRESSEE: OLIFF & BERRIDGE, PLC
      STREET: 700 South Washington Street
      CITY: Alexandria
      STATE: VA
     COUNTRY: USA
      ZIP: 22314
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.30
   CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/687,219B
      FILING DATE: 25-JUL-1996
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: FR 95 09005
      FILING DATE: 25-JUL-1995
    ATTORNEY/AGENT INFORMATION:
      NAME: Berridge, William P.
      REGISTRATION NUMBER: 30,024
      REFERENCE/DOCKET NUMBER: WPB 38526
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 703 836-6400
      TELEFAX: 703 836-2787
  INFORMATION FOR SEQ ID NO: 4:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 8 amino acids
      TYPE: amino acid
      TOPOLOGY: unknown
    MOLECULE TYPE: peptide
    FRAGMENT TYPE: N-terminal or C-terminal or internal
US-08-687-219B-4
 Query Match
                         60.0%; Score 3; DB 2; Length 8;
 Best Local Similarity 100.0%; Pred. No. 2.5e+05;
          3; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Qу
           2 SRL 4
             5 SRL 7
Db
```

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RESULT 38
US-08-687-219B-5
; Sequence 5, Application US/08687219B
; Patent No. 5985541
  GENERAL INFORMATION:
     APPLICANT: JOLIVET-REYNAUD, Colette
     TITLE OF INVENTION: PEPTIDE CAPABLE OF BEING RECOGNIZED BY
     TITLE OF INVENTION: ANTIBODIES RECOGNIZING THE C33 ANTIGEN OF HEPATITIS C
VIRUS
     NUMBER OF SEQUENCES: 40
     CORRESPONDENCE ADDRESS:
      ADDRESSEE: OLIFF & BERRIDGE, PLC
       STREET: 700 South Washington Street
      CITY: Alexandria
      STATE: VA
      COUNTRY: USA
       ZIP: 22314
    COMPUTER READABLE FORM:
     MEDIUM TYPE: Floppy disk
       COMPUTER: PC compatible
       OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.30
   CURRENT APPLICATION DATA:
     APPLICATION NUMBER: US/08/687,219B
      FILING DATE: 25-JUL-1996
   PRIOR APPLICATION DATA:
      APPLICATION NUMBER: FR 95 09005
      FILING DATE: 25-JUL-1995
    ATTORNEY/AGENT INFORMATION:
      NAME: Berridge, William P.
      REGISTRATION NUMBER: 30,024
      REFERENCE/DOCKET NUMBER: WPB 38526
    TELECOMMUNICATION INFORMATION:
       TELEPHONE: 703 836-6400
       TELEFAX: 703 836-2787
  INFORMATION FOR SEQ ID NO: 5:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 8 amino acids
      TYPE: amino acid
      TOPOLOGY: unknown
    MOLECULE TYPE: peptide FRAGMENT TYPE: N-terminal or C-terminal or internal
US-08-687-219B-5
  Query Match
                         60.0%; Score 3; DB 2; Length 8;
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
 Matches
           3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                            0;
Qу
           2 SRL 4
             Db
           4 SRL 6
RESULT 39
US-08-687-219B-6
; Sequence 6, Application US/08687219B
```

```
; Patent No. 5985541
  GENERAL INFORMATION:
     APPLICANT: JOLIVET-REYNAUD, Colette
     TITLE OF INVENTION: PEPTIDE CAPABLE OF BEING RECOGNIZED BY
     TITLE OF INVENTION: ANTIBODIES RECOGNIZING THE C33 ANTIGEN OF HEPATITIS C
VIRUS
    NUMBER OF SEOUENCES: 40
     CORRESPONDENCE ADDRESS:
       ADDRESSEE: OLIFF & BERRIDGE, PLC
       STREET: 700 South Washington Street
      CITY: Alexandria
      STATE: VA
     COUNTRY: USA
     ZIP: 22314
   COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
       COMPUTER: PC compatible
     OPERATING SYSTEM: PC-DOS/MS-DOS
     SOFTWARE: PatentIn Release #1.0, Version #1.30
   CURRENT APPLICATION DATA:
     APPLICATION NUMBER: US/08/687,219B
      FILING DATE: 25-JUL-1996
   PRIOR APPLICATION DATA:
     APPLICATION NUMBER: FR 95 09005
     FILING DATE: 25-JUL-1995
   ATTORNEY/AGENT INFORMATION:
     NAME: Berridge, William P.
     REGISTRATION NUMBER: 30,024
      REFERENCE/DOCKET NUMBER: WPB 38526
   TELECOMMUNICATION INFORMATION:
    TELEPHONE: 703 836-6400
      TELEFAX: 703 836-2787
  INFORMATION FOR SEQ ID NO: 6:
   SEQUENCE CHARACTERISTICS:
      LENGTH: 8 amino acids
      TYPE: amino acid
      TOPOLOGY: unknown
    MOLECULE TYPE: peptide
    FRAGMENT TYPE: N-terminal or C-terminal or internal
US-08-687-219B-6
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Qу
             Db
          3 SRL 5
RESULT 40
US-08-687-219B-7
; Sequence 7, Application US/08687219B
; Patent No. 5985541
  GENERAL INFORMATION:
    APPLICANT: JOLIVET-REYNAUD, Colette
    TITLE OF INVENTION: PEPTIDE CAPABLE OF BEING RECOGNIZED BY
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TITLE OF INVENTION: ANTIBODIES RECOGNIZING THE C33 ANTIGEN OF HEPATITIS C
VIRUS
     NUMBER OF SEQUENCES: 40
     CORRESPONDENCE ADDRESS:
      ADDRESSEE: OLIFF & BERRIDGE, PLC
      STREET: 700 South Washington Street
      CITY: Alexandria
      STATE: VA
      COUNTRY: USA
      ZIP: 22314
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
     SOFTWARE: PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
     APPLICATION NUMBER: US/08/687,219B
      FILING DATE: 25-JUL-1996
    PRIOR APPLICATION DATA:
     APPLICATION NUMBER: FR 95 09005
      FILING DATE: 25-JUL-1995
   ATTORNEY/AGENT INFORMATION:
      NAME: Berridge, William P.
      REGISTRATION NUMBER: 30,024
      REFERENCE/DOCKET NUMBER: WPB 38526
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 703 836-6400
      TELEFAX: 703 836-2787
  INFORMATION FOR SEQ ID NO: 7:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 8 amino acids
      TYPE: amino acid
      TOPOLOGY: unknown
    MOLECULE TYPE: peptide
     FRAGMENT TYPE: N-terminal or C-terminal or internal
US-08-687-219B-7
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Qу
           2 SRL 4
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Db
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US-08-687-219B-8
; Sequence 8, Application US/08687219B
; Patent No. 5985541
; GENERAL INFORMATION:
    APPLICANT: JOLIVET-REYNAUD, Colette
    TITLE OF INVENTION: PEPTIDE CAPABLE OF BEING RECOGNIZED BY
    TITLE OF INVENTION: ANTIBODIES RECOGNIZING THE C33 ANTIGEN OF HEPATITIS C
VIRUS
    NUMBER OF SEQUENCES: 40
    CORRESPONDENCE ADDRESS:
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ADDRESSEE: OLIFF & BERRIDGE, PLC
       STREET: 700 South Washington Street
       CITY: Alexandria
      STATE: VA
      COUNTRY: USA
      ZIP: 22314
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
       COMPUTER: PC compatible
       OPERATING SYSTEM: PC-DOS/MS-DOS
       SOFTWARE: PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
     APPLICATION NUMBER: US/08/687,219B
      FILING DATE: 25-JUL-1996
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: FR 95 09005
      FILING DATE: 25-JUL-1995
    ATTORNEY/AGENT INFORMATION:
     NAME: Berridge, William P.
      REGISTRATION NUMBER: 30,024
      REFERENCE/DOCKET NUMBER: WPB 38526
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 703 836-6400
      TELEFAX: 703 836-2787
  INFORMATION FOR SEQ ID NO: 8:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 8 amino acids
      TYPE: amino acid
      TOPOLOGY: unknown
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Qу
             +
Db
           1 SRL 3
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US-08-687-219B-19
; Sequence 19, Application US/08687219B
; Patent No. 5985541
  GENERAL INFORMATION:
    APPLICANT: JOLIVET-REYNAUD, Colette
    TITLE OF INVENTION: PEPTIDE CAPABLE OF BEING RECOGNIZED BY
    TITLE OF INVENTION: ANTIBODIES RECOGNIZING THE C33 ANTIGEN OF HEPATITIS C
VIRUS
    NUMBER OF SEQUENCES:
    CORRESPONDENCE ADDRESS:
     ADDRESSEE: OLIFF & BERRIDGE, PLC
      STREET: 700 South Washington Street
      CITY: Alexandria
     STATE: VA
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COUNTRY: USA
      ZIP: 22314
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
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      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.30
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      APPLICATION NUMBER: US/08/687,219B
      FILING DATE: 25-JUL-1996
   PRIOR APPLICATION DATA:
      APPLICATION NUMBER: FR 95 09005
      FILING DATE: 25-JUL-1995
    ATTORNEY/AGENT INFORMATION:
      NAME: Berridge, William P.
      REGISTRATION NUMBER: 30,024
      REFERENCE/DOCKET NUMBER: WPB 38526
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 703 836-6400
      TELEFAX: 703 836-2787
  INFORMATION FOR SEQ ID NO:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 8 amino acids
      TYPE: amino acid
      TOPOLOGY: unknown
    MOLECULE TYPE: peptide
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Qу
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US-08-687-219B-20
; Sequence 20, Application US/08687219B
; Patent No. 5985541
  GENERAL INFORMATION:
    APPLICANT: JOLIVET-REYNAUD, Colette
    TITLE OF INVENTION: PEPTIDE CAPABLE OF BEING RECOGNIZED BY
    TITLE OF INVENTION: ANTIBODIES RECOGNIZING THE C33 ANTIGEN OF HEPATITIS C
VIRUS
    NUMBER OF SEQUENCES: 40
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: OLIFF & BERRIDGE, PLC
      STREET: 700 South Washington Street
      CITY: Alexandria
      STATE: VA
      COUNTRY: USA
      ZIP: 22314
   COMPUTER READABLE FORM:
     MEDIUM TYPE: Floppy disk
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COMPUTER: PC compatible
       OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.30
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     APPLICATION NUMBER: US/08/687,219B
      FILING DATE: 25-JUL-1996
   PRIOR APPLICATION DATA:
     APPLICATION NUMBER: FR 95 09005
      FILING DATE: 25-JUL-1995
   ATTORNEY/AGENT INFORMATION:
     NAME: Berridge, William P.
      REGISTRATION NUMBER: 30,024
      REFERENCE/DOCKET NUMBER: WPB 38526
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 703 836-6400
      TELEFAX: 703 836-2787
  INFORMATION FOR SEQ ID NO: 20:
   SEQUENCE CHARACTERISTICS:
     LENGTH: 8 amino acids
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      TOPOLOGY: unknown
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    FRAGMENT TYPE: N-terminal or C-terminal or internal
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Db
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RESULT 44
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; Sequence 21, Application US/08687219B
; Patent No. 5985541
; GENERAL INFORMATION:
    APPLICANT: JOLIVET-REYNAUD, Colette
    TITLE OF INVENTION: PEPTIDE CAPABLE OF BEING RECOGNIZED BY
    TITLE OF INVENTION: ANTIBODIES RECOGNIZING THE C33 ANTIGEN OF HEPATITIS C
VIRUS
    NUMBER OF SEQUENCES: 40
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: OLIFF & BERRIDGE, PLC
      STREET: 700 South Washington Street
      CITY: Alexandria
      STATE: VA
      COUNTRY: USA
      ZIP: 22314
    COMPUTER READABLE FORM:
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APPLICATION NUMBER: US/08/687,219B
      FILING DATE: 25-JUL-1996
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      APPLICATION NUMBER: FR 95 09005
      FILING DATE: 25-JUL-1995
    ATTORNEY/AGENT INFORMATION:
      NAME: Berridge, William P.
      REGISTRATION NUMBER: 30,024
      REFERENCE/DOCKET NUMBER: WPB 38526
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 703 836-6400
      TELEFAX: 703 836-2787
  INFORMATION FOR SEO ID NO: 21:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 8 amino acids
      TYPE: amino acid
      TOPOLOGY: unknown
    MOLECULE TYPE: peptide
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 Matches
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QУ
           2 SRL 4
             111
           4 SRL 6
Dh
RESULT 45
US-08-687-219B-22
; Sequence 22, Application US/08687219B
; Patent No. 5985541
 GENERAL INFORMATION:
    APPLICANT: JOLIVET-REYNAUD, Colette
    TITLE OF INVENTION: PEPTIDE CAPABLE OF BEING RECOGNIZED BY
    TITLE OF INVENTION: ANTIBODIES RECOGNIZING THE C33 ANTIGEN OF HEPATITIS C
VIRUS
    NUMBER OF SEQUENCES: 40
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: OLIFF & BERRIDGE, PLC
      STREET: 700 South Washington Street
     CITY: Alexandria
     STATE: VA
      COUNTRY: USA
     ZIP: 22314
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
     APPLICATION NUMBER: US/08/687,219B
     FILING DATE: 25-JUL-1996
    PRIOR APPLICATION DATA:
    APPLICATION NUMBER: FR 95 09005
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FILING DATE: 25-JUL-1995
    ATTORNEY/AGENT INFORMATION:
     NAME: Berridge, William P.
      REGISTRATION NUMBER: 30,024
      REFERENCE/DOCKET NUMBER: WPB 38526
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 703 836-6400
      TELEFAX: 703 836-2787
  INFORMATION FOR SEQ ID NO: 22:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 8 amino acids
      TYPE: amino acid
      TOPOLOGY: unknown
    MOLECULE TYPE: peptide
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US-08-687-219B-22
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 Matches
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Qу
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Db
           3 SRL 5
RESULT 46
US-08-687-219B-23
; Sequence 23, Application US/08687219B
; Patent No. 5985541
  GENERAL INFORMATION:
    APPLICANT: JOLIVET-REYNAUD, Colette
    TITLE OF INVENTION: PEPTIDE CAPABLE OF BEING RECOGNIZED BY
    TITLE OF INVENTION: ANTIBODIES RECOGNIZING THE C33 ANTIGEN OF HEPATITIS C
VIRUS
    NUMBER OF SEQUENCES: 40
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: OLIFF & BERRIDGE, PLC
      STREET: 700 South Washington Street
      CITY: Alexandria
      STATE: VA
      COUNTRY: USA
      ZIP: 22314
    COMPUTER READABLE FORM:
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      FILING DATE: 25-JUL-1996
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: FR 95 09005
      FILING DATE: 25-JUL-1995
    ATTORNEY/AGENT INFORMATION:
     NAME: Berridge, William P.
      REGISTRATION NUMBER: 30,024
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REFERENCE/DOCKET NUMBER: WPB 38526
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 703 836-6400
      TELEFAX: 703 836-2787
 INFORMATION FOR SEQ ID NO: 23:
  SEQUENCE CHARACTERISTICS:
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      TOPOLOGY: unknown
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Db
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US-08-687-219B-24
; Sequence 24, Application US/08687219B
; Patent No. 5985541
  GENERAL INFORMATION:
    APPLICANT: JOLIVET-REYNAUD, Colette
    TITLE OF INVENTION: PEPTIDE CAPABLE OF BEING RECOGNIZED BY
    TITLE OF INVENTION: ANTIBODIES RECOGNIZING THE C33 ANTIGEN OF HEPATITIS C
VIRUS
    NUMBER OF SEQUENCES: 40
    CORRESPONDENCE ADDRESS:
     ADDRESSEE: OLIFF & BERRIDGE, PLC
      STREET: 700 South Washington Street
      CITY: Alexandria
     STATE: VA
     COUNTRY: USA
     ZIP: 22314
   COMPUTER READABLE FORM:
     MEDIUM TYPE: Floppy disk
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      OPERATING SYSTEM: PC-DOS/MS-DOS
     SOFTWARE: PatentIn Release #1.0, Version #1.30
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      FILING DATE: 25-JUL-1996
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: FR 95 09005
      FILING DATE: 25-JUL-1995
    ATTORNEY/AGENT INFORMATION:
      NAME: Berridge, William P.
      REGISTRATION NUMBER: 30,024
     REFERENCE/DOCKET NUMBER: WPB 38526
    TELECOMMUNICATION INFORMATION:
     TELEPHONE: 703 836-6400
     TELEFAX: 703 836-2787
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INFORMATION FOR SEQ ID NO: 24:
    SEQUENCE CHARACTERISTICS:
       LENGTH: 8 amino acids
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Qу
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             Db
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RESULT 48
US-08-687-219B-35
; Sequence 35, Application US/08687219B
; Patent No. 5985541
  GENERAL INFORMATION:
    APPLICANT: JOLIVET-REYNAUD, Colette
    TITLE OF INVENTION: PEPTIDE CAPABLE OF BEING RECOGNIZED BY
    TITLE OF INVENTION: ANTIBODIES RECOGNIZING THE C33 ANTIGEN OF HEPATITIS C
VIRUS
    NUMBER OF SEQUENCES: 40
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: OLIFF & BERRIDGE, PLC
      STREET: 700 South Washington Street
      CITY: Alexandria
      STATE: VA
      COUNTRY: USA
      ZIP: 22314
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.30
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      APPLICATION NUMBER: US/08/687,219B
      FILING DATE: 25-JUL-1996
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: FR 95 09005
      FILING DATE: 25-JUL-1995
    ATTORNEY/AGENT INFORMATION:
      NAME: Berridge, William P.
      REGISTRATION NUMBER: 30,024
      REFERENCE/DOCKET NUMBER: WPB 38526
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 703 836-6400
      TELEFAX: 703 836-2787
  INFORMATION FOR SEQ ID NO: 35:
   SEQUENCE CHARACTERISTICS:
     LENGTH: 8 amino acids
      TYPE: amino acid
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TOPOLOGY: unknown
     MOLECULE TYPE: peptide
     FRAGMENT TYPE: N-terminal or C-terminal or internal
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  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
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Qу
           2 SRL 4
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           4 SRL 6
RESULT 49
US-08-482-528-27
; Sequence 27, Application US/08482528
; Patent No. 6017719
  GENERAL INFORMATION:
    APPLICANT: Tseng-Law, Janet
    APPLICANT: Kobori, Joan A.
    APPLICANT: Al-Abdaly, Fahad A.
    APPLICANT: Guillermo, Roy
    APPLICANT: Helgerson, Sam L.
    APPLICANT: Deans, Robert J.
    TITLE OF INVENTION: POSITIVE AND POSITIVE/NEGATIVE CELL
    TITLE OF INVENTION: SELECTION MEDIATED BY PEPTIDE RELEASE
    NUMBER OF SEQUENCES: 215
    CORRESPONDENCE ADDRESS:
     ADDRESSEE: Janice Guthrie, Ph.D.
      STREET: P.O. Box 15210
     CITY: Irvine
     STATE: California
     COUNTRY: USA
     ZIP: 92713-5210
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/482,528
      FILING DATE: 07-JUN-1995
      CLASSIFICATION: 435
    ATTORNEY/AGENT INFORMATION:
      NAME: Guthrie, Janice
      REGISTRATION NUMBER: 35,170
      REFERENCE/DOCKET NUMBER: IT-4630CIP4
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (714) 440-5353
      TELEFAX: (714) 553-1952
  INFORMATION FOR SEQ ID NO: 27:
   SEQUENCE CHARACTERISTICS:
      LENGTH: 8 amino acids
      TYPE: amino acid
     TOPOLOGY: linear
    MOLECULE TYPE: peptide
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2 SRL 4

3 SRL 5

Qу

Db

GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.

OM protein - protein search, using sw model

Run on: November 28, 2003, 14:32:09; Search time 30 Seconds

(without alignments)

30.741 Million cell updates/sec

Title: US-09-228-866-45

Perfect score: 5

Sequence: 1 XSRLX 5

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SUMMARIES

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Sequence 36, Appl
Sequence 31, Appl
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ALIGNMENTS

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RESULT 1
US-09-096-749A-41
; Sequence 41, Application US/09096749A
; Patent No. US20020019517A1
; GENERAL INFORMATION:
; APPLICANT: Koieda, Shohei
; TITLE OF INVENTION: ARTIFICIAL ANTIBODY POLYPEPTIDES
; NUMBER OF SEQUENCES: 118
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CORRESPONDENCE ADDRESS:
       ADDRESSEE: Schwegman, Lundberg, Woessner & Kluth P.A.
       STREET: 121 South Eighth Street, Ste. 1600
      CITY: Minneapolis
      STATE: MN
     COUNTRY: USA
      ZIP: 55402
   COMPUTER READABLE FORM:
      MEDIUM TYPE: Diskette
       COMPUTER: IBM Compatible
      OPERATING SYSTEM: DOS
       SOFTWARE: FastSEQ Version 2.0b
   CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/09/096,749A
     FILING DATE: June 12, 1998
   PRIOR APPLICATION DATA:
     APPLICATION NUMBER:
      FILING DATE:
   ATTORNEY/AGENT INFORMATION:
     NAME: Ann S. Viksnins
      REGISTRATION NUMBER: 37,748
      REFERENCE/DOCKET NUMBER: 109.034US1
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (612) 373-6900
      TELEFAX: (612) 339-3061
  INFORMATION FOR SEQ ID NO: 41:
    SEQUENCE CHARACTERISTICS:
     LENGTH: 5 amino acids
      TYPE: amino acid
      STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
    HYPOTHETICAL: NO
    ANTI-SENSE: NO
    FRAGMENT TYPE: internal
    ORIGINAL SOURCE:
US-09-096-749A-41
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US-09-096-749A-98
; Sequence 98, Application US/09096749A
; Patent No. US20020019517A1
; GENERAL INFORMATION:
    APPLICANT: Koieda, Shohei
    TITLE OF INVENTION: ARTIFICIAL ANTIBODY POLYPEPTIDES
    NUMBER OF SEQUENCES: 118
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Schwegman, Lundberg, Woessner & Kluth P.A.
```

```
STREET: 121 South Eighth Street, Ste. 1600
       CITY: Minneapolis
       STATE: MN
       COUNTRY: USA
       ZIP: 55402
     COMPUTER READABLE FORM:
     MEDIUM TYPE: Diskette
       COMPUTER: IBM Compatible
       OPERATING SYSTEM: DOS
       SOFTWARE: FastSEQ Version 2.0b
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/09/096,749A
       FILING DATE: June 12, 1998
     PRIOR APPLICATION DATA:
      APPLICATION NUMBER:
       FILING DATE:
    ATTORNEY/AGENT INFORMATION:
      NAME: Ann S. Viksnins
       REGISTRATION NUMBER: 37,748
       REFERENCE/DOCKET NUMBER: 109.034US1
    TELECOMMUNICATION INFORMATION:
       TELEPHONE: (612) 373-6900
       TELEFAX: (612) 339-3061
  INFORMATION FOR SEQ ID NO:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 5 amino acids
       TYPE: amino acid
      STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
    HYPOTHETICAL: NO
    ANTI-SENSE: NO
    FRAGMENT TYPE: internal
    ORIGINAL SOURCE:
US-09-096-749A-98
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 Matches
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Db
           1 SRL 3
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US-09-903-412-41
; Sequence 41, Application US/09903412
; Publication No. US20030027319A1
; GENERAL INFORMATION:
; APPLICANT: Koide, Shohei
; TITLE OF INVENTION: ARTIFICIAL ANTIBODY POLYPEPTIDES
  FILE REFERENCE: 109.050US1
  CURRENT APPLICATION NUMBER: US/09/903,412
  CURRENT FILING DATE: 2001-07-11
 PRIOR APPLICATION NUMBER: US 60/217,474
 PRIOR FILING DATE: 2000-07-11
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; NUMBER OF SEQ ID NOS: 121
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 41
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   TYPE: PRT
   ORGANISM: Artificial Sequence
   OTHER INFORMATION: The sequence of the BC loop of ubiquitin-binding
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US-09-903-412-41
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US-09-903-412-98
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; Publication No. US20030027319A1
; GENERAL INFORMATION:
; APPLICANT: Koide, Shohei
  TITLE OF INVENTION: ARTIFICIAL ANTIBODY POLYPEPTIDES
; FILE REFERENCE: 109.050US1
  CURRENT APPLICATION NUMBER: US/09/903,412
  CURRENT FILING DATE: 2001-07-11
; PRIOR APPLICATION NUMBER: US 60/217,474
; PRIOR FILING DATE: 2000-07-11
; NUMBER OF SEQ ID NOS: 121
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; Sequence 41, Application US/10165155
; Publication No. US20030134386A1
; GENERAL INFORMATION:
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APPLICANT: Koieda, Shohei
         TITLE OF INVENTION: ARTIFICIAL ANTIBODY POLYPEPTIDES
         NUMBER OF SEQUENCES: 118
         CORRESPONDENCE ADDRESS:
              ADDRESSEE: Schwegman, Lundberg, Woessner & Kluth P.A.
              STREET: 121 South Eighth Street, Ste. 1600
              CITY: Minneapolis
              STATE: MN
              COUNTRY: USA
              ZIP: 55402
         COMPUTER READABLE FORM:
              MEDIUM TYPE: Diskette
              COMPUTER: IBM Compatible
              OPERATING SYSTEM: DOS
              SOFTWARE: FastSEQ Version 2.0b
         CURRENT APPLICATION DATA:
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              FILING DATE: 06-Jun-2002
         PRIOR APPLICATION DATA:
              APPLICATION NUMBER: US/09/096,749
              FILING DATE: June 12, 1998
         ATTORNEY/AGENT INFORMATION:
              NAME: Ann S. Viksnins
              REGISTRATION NUMBER: 37,748
              REFERENCE/DOCKET NUMBER: 109.034US1
         TELECOMMUNICATION INFORMATION:
              TELEPHONE: (612) 373-6900
              TELEFAX: (612) 339-3061
    INFORMATION FOR SEQ ID NO: 41:
         SEQUENCE CHARACTERISTICS:
              LENGTH: 5 amino acids
              TYPE: amino acid
              STRANDEDNESS: single
              TOPOLOGY: linear
        MOLECULE TYPE: peptide
         HYPOTHETICAL: NO
         ANTI-SENSE: NO
         FRAGMENT TYPE: internal
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              \Pi\Pi
Db
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US-10-165-155-98
; Sequence 98, Application US/10165155
; Publication No. US20030134386A1
   GENERAL INFORMATION:
        APPLICANT: Koieda, Shohei
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TITLE OF INVENTION: ARTIFICIAL ANTIBODY POLYPEPTIDES
         NUMBER OF SEQUENCES: 118
         CORRESPONDENCE ADDRESS:
              ADDRESSEE: Schwegman, Lundberg, Woessner & Kluth P.A.
              STREET: 121 South Eighth Street, Ste. 1600
              CITY: Minneapolis
              STATE: MN
              COUNTRY: USA
              ZIP: 55402
        COMPUTER READABLE FORM:
              MEDIUM TYPE: Diskette
              COMPUTER: IBM Compatible
              OPERATING SYSTEM: DOS
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              APPLICATION NUMBER: US/10/165,155
              FILING DATE: 06-Jun-2002
         PRIOR APPLICATION DATA:
              APPLICATION NUMBER: US/09/096,749
              FILING DATE: June 12, 1998
         ATTORNEY/AGENT INFORMATION:
              NAME: Ann S. Viksnins
              REGISTRATION NUMBER: 37,748
              REFERENCE/DOCKET NUMBER: 109.034US1
         TELECOMMUNICATION INFORMATION:
              TELEPHONE: (612) 373-6900
              TELEFAX: (612) 339-3061
   INFORMATION FOR SEQ ID NO: 98:
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              LENGTH: 5 amino acids
              TYPE: amino acid
              STRANDEDNESS: single
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; Sequence 41, Application US/10190162
; Publication No. US20030170753A1
   GENERAL INFORMATION:
        APPLICANT: Koieda, Shohei
        TITLE OF INVENTION: ARTIFICIAL ANTIBODY POLYPEPTIDES
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NUMBER OF SEQUENCES: 118
         CORRESPONDENCE ADDRESS:
              ADDRESSEE: Schwegman, Lundberg, Woessner & Kluth P.A.
              STREET: 121 South Eighth Street, Ste. 1600
              CITY: Minneapolis
              STATE: MN
              COUNTRY: USA
              ZIP: 55402
         COMPUTER READABLE FORM:
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         PRIOR APPLICATION DATA:
              APPLICATION NUMBER: US/09/096,749
              FILING DATE: June 12, 1998
         ATTORNEY/AGENT INFORMATION:
              NAME: Ann S. Viksnins
              REGISTRATION NUMBER: 37,748
              REFERENCE/DOCKET NUMBER: 109.034US1
         TELECOMMUNICATION INFORMATION:
              TELEPHONE: (612) 373-6900
              TELEFAX: (612) 339-3061
  INFORMATION FOR SEQ ID NO: 41:
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         HYPOTHETICAL: NO
         ANTI-SENSE: NO
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         ORIGINAL SOURCE:
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; Publication No. US20030170753A1
   GENERAL INFORMATION:
         APPLICANT: Koieda, Shohei
         TITLE OF INVENTION: ARTIFICIAL ANTIBODY POLYPEPTIDES
        NUMBER OF SEQUENCES: 118
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CORRESPONDENCE ADDRESS:
              ADDRESSEE: Schwegman, Lundberg, Woessner & Kluth P.A.
              STREET: 121 South Eighth Street, Ste. 1600
              CITY: Minneapolis
              STATE: MN
              COUNTRY: USA
              ZIP: 55402
        COMPUTER READABLE FORM:
              MEDIUM TYPE: Diskette
              COMPUTER: IBM Compatible
              OPERATING SYSTEM: DOS
              SOFTWARE: FastSEQ Version 2.0b
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              FILING DATE: 03-Jul-2002
         PRIOR APPLICATION DATA:
              APPLICATION NUMBER: US/09/096,749
              FILING DATE: June 12, 1998
         ATTORNEY/AGENT INFORMATION:
              NAME: Ann S. Viksnins
              REGISTRATION NUMBER: 37,748
              REFERENCE/DOCKET NUMBER: 109.034US1
         TELECOMMUNICATION INFORMATION:
              TELEPHONE: (612) 373-6900
              TELEFAX: (612) 339-3061
  INFORMATION FOR SEQ ID NO: 98:
         SEQUENCE CHARACTERISTICS:
              LENGTH: 5 amino acids
              TYPE: amino acid
              STRANDEDNESS: single
              TOPOLOGY: linear
        MOLECULE TYPE: peptide
        HYPOTHETICAL: NO
        ANTI-SENSE: NO
         FRAGMENT TYPE: internal
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Db
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US-10-302-817A-36
; Sequence 36, Application US/10302817A
; Publication No. US20030198978A1
; GENERAL INFORMATION:
; APPLICANT: ROZZELLE, James
  APPLICANT: BOLCHAKOVA, Elena
  TITLE OF INVENTION: THERMUS BROCKIANUS NUCLEIC ACID POLYMERASES
; FILE REFERENCE: 4768US
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; CURRENT APPLICATION NUMBER: US/10/302,817A
  CURRENT FILING DATE: 2002-11-22
; PRIOR APPLICATION NUMBER: 60/334,434
; PRIOR FILING DATE: 2001-11-30
; NUMBER OF SEQ ID NOS: 58
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 36
   LENGTH: 5
   TYPE: PRT
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US-10-302-817A-36
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 Best Local Similarity 100.0%; Pred. No. 6e+05;
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Qу
             | | | |
           2 SRL 4
RESULT 10
US-10-103-327-31
; Sequence 31, Application US/10103327
; Publication No. US20030106095A1
; GENERAL INFORMATION:
 APPLICANT: GARGER, Stephen A.
  APPLICANT: TURPEN, Thomas H.
 APPLICANT: KUMAGAI, Monto H.
  TITLE OF INVENTION: PRODUCTION OF LYSOSOMAL ENZYMES IN
  TITLE OF INVENTION: PLANTS BY TRANSIENT EXPRESSION
 FILE REFERENCE: 008010087CPUS06
  CURRENT APPLICATION NUMBER: US/10/103,327
; CURRENT FILING DATE: 2002-03-20
; PRIOR APPLICATION NUMBER: US/09/993,059
; PRIOR FILING DATE: 2001-11-13
; NUMBER OF SEQ ID NOS: 37
 SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 31
   LENGTH: 5
   TYPE: PRT
   ORGANISM: Tobacco mosaic virus
US-10-103-327-31
 Query Match
                         60.0%; Score 3; DB 15; Length 5;
 Best Local Similarity 100.0%; Pred. No. 6e+05;
 Matches 3; Conservative 0; Mismatches 0; Indels
                                                               0; Gaps
                                                                           0:
           2 SRL 4
Qу
            2 SRL 4
Db
RESULT 11
US-10-174-717A-41
; Sequence 41, Application US/10174717A
; Publication No. US20030108948A1
```

```
APPLICANT: Koide, Shohei
         TITLE OF INVENTION: ARTIFICIAL ANTIBODY POLYPEPTIDES
         NUMBER OF SEQUENCES: 118
         CORRESPONDENCE ADDRESS:
              ADDRESSEE: Schwegman, Lundberg, Woessner & Kluth P.A.
              STREET: 121 South Eighth Street, St. 1600
              CITY: Minneapolis
              STATE: MN
              COUNTRY: USA
              ZIP: 55402
        COMPUTER READABLE FORM:
              MEDIUM TYPE: Diskette
              COMPUTER: IBM Compatible
              OPERATING SYSTEM: WINDOWS
              SOFTWARE: FastSEQ Version 2.0b
         CURRENT APPLICATION DATA:
              APPLICATION NUMBER: US/10/174,717A
              FILING DATE: 18-Jun-2002
        PRIOR APPLICATION DATA:
              APPLICATION NUMBER: 09/096,749
              FILING DATE: June 12, 1998
              APPLICATION NUMBER: 60/049,410
              FILING DATE: June 12, 1997
         ATTORNEY/AGENT INFORMATION:
              NAME: Ann S. Viksnins
              REGISTRATION NUMBER: 37,748
              REFERENCE/DOCKET NUMBER: 109.034US4
         TELECOMMUNICATION INFORMATION:
              TELEPHONE: (612) 373-6900
              TELEFAX: (612) 339-3061
  INFORMATION FOR SEQ ID NO: 41:
         SEQUENCE CHARACTERISTICS:
              LENGTH: 5 amino acids
              TYPE: amino acid
              STRANDEDNESS: single
              TOPOLOGY: linear
         MOLECULE TYPE: peptide
         HYPOTHETICAL: NO
         ANTI-SENSE: NO
         FRAGMENT TYPE: internal
         ORIGINAL SOURCE:
         SEQUENCE DESCRIPTION: SEQ ID NO: 41:
US-10-174-717A-41
  Query Match
                          60.0%; Score 3; DB 15; Length 5;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
           3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                             0;
Qу
            2 SRL 4
              Db
            1 SRL 3
RESULT 12
US-10-174-717A-98
; Sequence 98, Application US/10174717A
; Publication No. US20030108948A1
```

```
APPLICANT: Koide, Shohei
         TITLE OF INVENTION: ARTIFICIAL ANTIBODY POLYPEPTIDES
         NUMBER OF SEQUENCES: 118
         CORRESPONDENCE ADDRESS:
              ADDRESSEE: Schwegman, Lundberg, Woessner & Kluth P.A.
              STREET: 121 South Eighth Street, St. 1600
              CITY: Minneapolis
              STATE: MN
              COUNTRY: USA
              ZIP: 55402
        COMPUTER READABLE FORM:
              MEDIUM TYPE: Diskette
              COMPUTER: IBM Compatible
              OPERATING SYSTEM: WINDOWS
              SOFTWARE: FastSEQ Version 2.0b
         CURRENT APPLICATION DATA:
              APPLICATION NUMBER: US/10/174,717A
              FILING DATE: 18-Jun-2002
        PRIOR APPLICATION DATA:
              APPLICATION NUMBER: 09/096,749
              FILING DATE: June 12, 1998
              APPLICATION NUMBER: 60/049,410
              FILING DATE: June 12, 1997
         ATTORNEY/AGENT INFORMATION:
              NAME: Ann S. Viksnins
              REGISTRATION NUMBER: 37,748
              REFERENCE/DOCKET NUMBER: 109.034US4
         TELECOMMUNICATION INFORMATION:
              TELEPHONE: (612) 373-6900
              TELEFAX: (612) 339-3061
   INFORMATION FOR SEQ ID NO: 98:
         SEQUENCE CHARACTERISTICS:
              LENGTH: 5 amino acids
              TYPE: amino acid
              STRANDEDNESS: single
              TOPOLOGY: linear
         MOLECULE TYPE: peptide
         HYPOTHETICAL: NO
         ANTI-SENSE: NO
         FRAGMENT TYPE: internal
         ORIGINAL SOURCE:
         SEQUENCE DESCRIPTION: SEQ ID NO: 98:
US-10-174-717A-98
  Query Match
                          60.0%; Score 3; DB 15; Length 5;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
          3; Conservative 0; Mismatches 0; Indels
  Matches
                                                              0; Gaps
                                                                             0;
Qу
            2 SRL 4
              111
Db
            1 SRL 3
RESULT 13
US-09-900-530A-34
; Sequence 34, Application US/09900530A
; Patent No. US20020128438A1
```

```
; GENERAL INFORMATION:
  APPLICANT: Seol, Dae-Wu
  APPLICANT: Billiar, Timothy R.
  TITLE OF INVENTION: DNA Cassette for the Production of
  TITLE OF INVENTION: Secretable Recombinant Trimeric Trail Proteins,
Tetracycline
  TITLE OF INVENTION: /Doxycycline-Inducible Adeno-Associated Virus Vector,
Their
  TITLE OF INVENTION: Combination and Use in Gene Therapy
  FILE REFERENCE: 5006-1-002
  CURRENT APPLICATION NUMBER: US/09/900,530A
; CURRENT FILING DATE: 2002-03-19
; PRIOR APPLICATION NUMBER: KR 2000-38441
; PRIOR FILING DATE: 2000-07-06
; NUMBER OF SEQ ID NOS: 48
  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 34
   LENGTH: 6
    TYPE: PRT
    ORGANISM: homo sapiens
US-09-900-530A-34
  Query Match
                         60.0%; Score 3; DB 10; Length 6;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
 Matches
          3; Conservative 0; Mismatches
                                               0; Indels
                                                                0; Gaps
                                                                            0;
QУ
           2 SRL 4
             Db
           2 SRL 4
RESULT 14
US-09-071-838-50
; Sequence 50, Application US/09071838
; Patent No. US20020152501A1
  GENERAL INFORMATION:
    APPLICANT: Fischer, Robert L.
    APPLICANT: Ohad, Nir
    APPLICANT: Kiyosue, Tomohiro
    APPLICANT: Yadegari, Ramin
    APPLICANT: Margossian, Linda
    APPLICANT: Harada, John
    APPLICANT: Goldberg, Robert B.
    TITLE OF INVENTION: Nucleic Acids That Control Seed and
    TITLE OF INVENTION: Fruit Development in Plants
    NUMBER OF SEQUENCES: 324
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Townsend and Townsend and Crew LLP
      STREET: Two Embarcadero Center, Eighth Floor
      CITY: San Francisco
      STATE: California
      COUNTRY: USA
      ZIP: 94111-3834
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
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SOFTWARE: PatentIn Release #1.0, Version #1.30
     CURRENT APPLICATION DATA:
       APPLICATION NUMBER: US/09/071,838
       FILING DATE: 01-MAY-1998
       CLASSIFICATION: 800
    ATTORNEY/AGENT INFORMATION:
     NAME: Bastian, Kevin L.
       REGISTRATION NUMBER: 34,774
       REFERENCE/DOCKET NUMBER: 023070-086100US
     TELECOMMUNICATION INFORMATION:
       TELEPHONE: (415) 576-0200
       TELEFAX: (415) 576-0300
  INFORMATION FOR SEQ ID NO: 50:
   SEQUENCE CHARACTERISTICS:
     LENGTH: 6 amino acids
       TYPE: amino acid
       TOPOLOGY: linear
     MOLECULE TYPE: peptide
US-09-071-838-50
  Query Match
                          60.0%; Score 3; DB 10; Length 6;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
  Matches 3; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
                                                                            0;
Qу
            2 SRL 4
              Db
            2 SRL 4
RESULT 15
US-09-851-026-18
; Sequence 18, Application US/09851026
; Patent No. US20020160957A1
   GENERAL INFORMATION:
        APPLICANT: Stern, David M.
                   Clauss, Matthias
                   Kao, Janet
                   Kayton, Mark
                   Libutti, Steven K
        TITLE OF INVENTION: Endothelial Monocyte Activating
                            Polypeptide II: A Mediator Which Activates Host
Response
        NUMBER OF SEQUENCES: 42
        CORRESPONDENCE ADDRESS:
             ADDRESSEE: Cooper & Dunham, LLP
             STREET: 1185 Avenue of the Americas
             CITY: New York
             STATE: New York
             COUNTRY: USA
             ZIP: 10036
        COMPUTER READABLE FORM:
             MEDIUM TYPE: Floppy disk
             COMPUTER: IBM PC compatible
             OPERATING SYSTEM: PC-DOS/MS-DOS
             SOFTWARE: PatentIn Release #1.30, Version #1.30
        CURRENT APPLICATION DATA:
             APPLICATION NUMBER: US/09/851,026
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FILING DATE: 07-May-2001
              CLASSIFICATION: <Unknown>
         PRIOR APPLICATION DATA:
              APPLICATION NUMBER: US/08/360,821
              FILING DATE: 08-OCT-96
        ATTORNEY/AGENT INFORMATION:
              NAME: White, John P.
              REGISTRATION NUMBER: 28,678
              REFERENCE/DOCKET NUMBER: 41735-A-PCT-US
        TELECOMMUNICATION INFORMATION:
              TELEPHONE: 212-278-0400
              TELEFAX: 212-391-0525
  INFORMATION FOR SEQ ID NO: 18:
         SEQUENCE CHARACTERISTICS:
              LENGTH: 6 amino acids
              TYPE: amino acid
              STRANDEDNESS: single
             TOPOLOGY: linear
        MOLECULE TYPE: Peptide
        SEQUENCE DESCRIPTION: SEQ ID NO: 18:
US-09-851-026-18
 Query Match
                         60.0%; Score 3; DB 10; Length 6;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
 Matches
          3; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
                                                                            0;
Qу
           2 SRL 4
             +111
Db
           2 SRL 4
RESULT 16
US-10-156-820-92
; Sequence 92, Application US/10156820
; Publication No. US20020150558A1
; GENERAL INFORMATION:
; APPLICANT: Boulanger, Pierre
; APPLICANT: Hong, Saw See
  APPLICANT: Karayan, Lucie
  TITLE OF INVENTION: Use of a Polypeptide as Cell Receptor for Adenoviruses
  FILE REFERENCE: 032751-036
  CURRENT APPLICATION NUMBER: US/10/156,820
  CURRENT FILING DATE: 2002-06-30
  PRIOR APPLICATION NUMBER: PCT/FR98/00184
  PRIOR FILING DATE: 1998-01-30
  PRIOR APPLICATION NUMBER: FR 97/01005
  PRIOR FILING DATE: 1997-01-30
 PRIOR APPLICATION NUMBER: FR 97/11166
  PRIOR FILING DATE: 1997-09-09
; NUMBER OF SEQ ID NOS: 98
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 92
  LENGTH: 6
   TYPE: PRT
  ORGANISM: Artificial Sequence
  OTHER INFORMATION: Phagotope
```

```
US-10-156-820-92
```

```
Query Match
                         60.0%; Score 3; DB 14; Length 6;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
           3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                           0;
Qу
            2 SRL 4
             Db
           1 SRL 3
RESULT 17
US-10-213-512-50
; Sequence 50, Application US/10213512
; Publication No. US20030110536A1
; GENERAL INFORMATION:
; APPLICANT: Fischer, Robert L.
  APPLICANT: Ohad, Nir
; APPLICANT: Kiyosue, Tomohiro
; APPLICANT: Yadegari, Ramin
; APPLICANT: Margossian, Linda
; APPLICANT: Harada, John
; APPLICANT: Goldberg, Robert B.
  APPLICANT: The Regents of the University of California
  TITLE OF INVENTION: Combinations of Nucleic Acids That Control Seed and
; TITLE OF INVENTION: Fruit Development in Plants
; FILE REFERENCE: 023070-086110US
  CURRENT APPLICATION NUMBER: US/10/213,512
  CURRENT FILING DATE: 2002-08-06
  PRIOR APPLICATION NUMBER: US/09/177,206
  PRIOR FILING DATE: 1998-10-22
; PRIOR APPLICATION NUMBER: US 09/071,838
; PRIOR FILING DATE: 1998-05-01
; NUMBER OF SEQ ID NOS: 324
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 50
  LENGTH: 6
   TYPE: PRT
  ORGANISM: Arabidopsis sp.
US-10-213-512-50
 Query Match
                         60.0%; Score 3; DB 15; Length 6;
 Best Local Similarity 100.0%; Pred. No. 6e+05;
          3; Conservative 0; Mismatches 0; Indels 0; Gaps
 Matches
                                                                          0;
Qу
           2 SRL 4
             Db
           2 SRL 4
RESULT 18
US-09-989-789-1558
; Sequence 1558, Application US/09989789
; Patent No. US20020063379A1
; GENERAL INFORMATION:
; APPLICANT: LIU, Qiang
; TITLE OF INVENTION: POSITION DEPENDENT RECOGNITION OF GNN NUCLEOTIDE
```

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; TITLE OF INVENTION: TRIPLETS BY ZINC FINGERS
; FILE REFERENCE: 8325-0011.20 / S11-US2
; CURRENT APPLICATION NUMBER: US/09/989,789
; CURRENT FILING DATE: 2002-03-25
; NUMBER OF SEQ ID NOS: 4085
 SOFTWARE: PatentIn Ver. 2.0
; SEO ID NO 1558
   LENGTH: 7
   TYPE: PRT
    ORGANISM: Artificial Sequence
  FEATURE:
    OTHER INFORMATION: Description of Artificial Sequence: example ZFP
US-09-989-789-1558
  Query Match
                         60.0%; Score 3; DB 9; Length 7;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
          3; Conservative 0; Mismatches 0; Indels
                                                               0; Gaps
                                                                           0:
           2 SRL 4
Qу
             | | |
            3 SRL 5
RESULT 19
US-09-192-854-16
; Sequence 16, Application US/09192854
; Patent No. US20020068276A1
; GENERAL INFORMATION:
; APPLICANT: Winter, Greq
  APPLICANT: Tomlinson, Ian
; TITLE OF INVENTION: Methods for Selecting Functional Peptides
; FILE REFERENCE: 3789/72916
; CURRENT APPLICATION NUMBER: US/09/192,854
; CURRENT FILING DATE: 1998-11-17
; EARLIER APPLICATION NUMBER: 60/066,729
  EARLIER FILING DATE: 1997-11-21
; NUMBER OF SEQ ID NOS: 212
; SOFTWARE: PatentIn Ver. 2.0
; SEO ID NO 16
   LENGTH: 7
    TYPE: PRT
    ORGANISM: Homo sapiens
US-09-192-854-16
  Query Match
                         60.0%; Score 3; DB 9; Length 7;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
          3; Conservative 0; Mismatches 0; Indels
                                                               0; Gaps
                                                                           0;
Qу
           2 SRL 4
              Db
           3 SRL 5
RESULT 20
US-09-192-854-43
; Sequence 43, Application US/09192854
; Patent No. US20020068276A1
```

```
; GENERAL INFORMATION:
 ; APPLICANT: Winter, Greg
; APPLICANT: Tomlinson, Ian
  TITLE OF INVENTION: Methods for Selecting Functional Peptides
  FILE REFERENCE: 3789/72916
; CURRENT APPLICATION NUMBER: US/09/192,854
; CURRENT FILING DATE: 1998-11-17
; EARLIER APPLICATION NUMBER: 60/066,729
; EARLIER FILING DATE: 1997-11-21
; NUMBER OF SEQ ID NOS: 212
  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 43
; LENGTH: 7
  TYPE: PRT
  ORGANISM: Homo sapiens
US-09-192-854-43
  Query Match
                        60.0%; Score 3; DB 9; Length 7;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
  Matches 3; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
QУ
          2 SRL 4
            Db
          3 SRL 5
RESULT 21
US-09-192-854-88
; Sequence 88, Application US/09192854
; Patent No. US20020068276A1
; GENERAL INFORMATION:
; APPLICANT: Winter, Greg
; APPLICANT: Tomlinson, Ian
; TITLE OF INVENTION: Methods for Selecting Functional Peptides
; FILE REFERENCE: 3789/72916
; CURRENT APPLICATION NUMBER: US/09/192,854
; CURRENT FILING DATE: 1998-11-17
; EARLIER APPLICATION NUMBER: 60/066,729
; EARLIER FILING DATE: 1997-11-21
; NUMBER OF SEO ID NOS: 212
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 88
  LENGTH: 7
   TYPE: PRT
   ORGANISM: Homo sapiens
US-09-192-854-88
 Query Match
                       60.0%; Score 3; DB 9; Length 7;
 Best Local Similarity 100.0%; Pred. No. 6e+05;
 Matches 3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                        0;
Qу
           2 SRL 4
            - 1 1 1
Db
           3 SRL 5
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```
US-09-192-854-101
; Sequence 101, Application US/09192854
; Patent No. US20020068276A1
; GENERAL INFORMATION:
; APPLICANT: Winter, Greq
; APPLICANT: Tomlinson, Ian
  TITLE OF INVENTION: Methods for Selecting Functional Peptides
; FILE REFERENCE: 3789/72916
; CURRENT APPLICATION NUMBER: US/09/192,854
; CURRENT FILING DATE: 1998-11-17
; EARLIER APPLICATION NUMBER: 60/066,729
; EARLIER FILING DATE: 1997-11-21
; NUMBER OF SEQ ID NOS: 212
; SOFTWARE: PatentIn Ver. 2.0
 SEQ ID NO 101
    LENGTH: 7
    TYPE: PRT
    ORGANISM: Homo sapiens
US-09-192-854-101
  Query Match
                          60.0%; Score 3; DB 9; Length 7;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
            3; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
                                                                            0;
            2 SRL 4
QУ
              3 SRL 5
RESULT 23
US-09-192-854-126
; Sequence 126, Application US/09192854
; Patent No. US20020068276A1
; GENERAL INFORMATION:
  APPLICANT: Winter, Greq
  APPLICANT: Tomlinson, Ian
  TITLE OF INVENTION: Methods for Selecting Functional Peptides
  FILE REFERENCE: 3789/72916
  CURRENT APPLICATION NUMBER: US/09/192,854
  CURRENT FILING DATE: 1998-11-17
  EARLIER APPLICATION NUMBER: 60/066,729
  EARLIER FILING DATE: 1997-11-21
  NUMBER OF SEQ ID NOS: 212
  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 126
   LENGTH: 7
   TYPE: PRT
   ORGANISM: Homo sapiens
US-09-192-854-126
  Query Match
                         60.0%; Score 3; DB 9; Length 7;
 Best Local Similarity 100.0%; Pred. No. 6e+05;
           3; Conservative 0; Mismatches 0; Indels
                                                             0; Gaps
                                                                           0;
Qу
           2 SRL 4
             \perp
Db
           3 SRL 5
```

```
RESULT 24
US-09-192-854-130
; Sequence 130, Application US/09192854
; Patent No. US20020068276A1
; GENERAL INFORMATION:
; APPLICANT: Winter, Greg
  APPLICANT: Tomlinson, Ian
  TITLE OF INVENTION: Methods for Selecting Functional Peptides
; FILE REFERENCE: 3789/72916
; CURRENT APPLICATION NUMBER: US/09/192,854
  CURRENT FILING DATE: 1998-11-17
; EARLIER APPLICATION NUMBER: 60/066,729
  EARLIER FILING DATE: 1997-11-21
  NUMBER OF SEQ ID NOS: 212
  SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 130
   LENGTH: 7
    TYPE: PRT
    ORGANISM: Homo sapiens
US-09-192-854-130
  Query Match
                         60.0%; Score 3; DB 9; Length 7;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
  Matches
          3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                           0;
Qу
            2 SRL 4
              3 SRL 5
RESULT 25
US-09-192-854-145
; Sequence 145, Application US/09192854
; Patent No. US20020068276A1
; GENERAL INFORMATION:
; APPLICANT: Winter, Greq
; APPLICANT: Tomlinson, Ian
  TITLE OF INVENTION: Methods for Selecting Functional Peptides
  FILE REFERENCE: 3789/72916
  CURRENT APPLICATION NUMBER: US/09/192,854
  CURRENT FILING DATE: 1998-11-17
  EARLIER APPLICATION NUMBER: 60/066,729
  EARLIER FILING DATE: 1997-11-21
; NUMBER OF SEQ ID NOS: 212
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 145
   LENGTH: 7
   TYPE: PRT
   ORGANISM: Homo sapiens
US-09-192-854-145
 Query Match
                         60.0%; Score 3; DB 9; Length 7;
 Best Local Similarity 100.0%; Pred. No. 6e+05;
          3; Conservative 0; Mismatches 0; Indels
 Matches
                                                               0; Gaps
                                                                           0;
```

```
Db
            3 SRL 5
RESULT 26
US-09-922-261-330
; Sequence 330, Application US/09922261
 ; Patent No. US20020111471A1
; GENERAL INFORMATION:
  APPLICANT: COGENT NEUROSCIENCE, Inc.
; APPLICANT: Lo, Donald C.
  APPLICANT: Barney, Shawn
  APPLICANT: Thomas, Mary Beth
  APPLICANT: Portbury, Stuart D.
   APPLICANT: Puranam, Kasturi
   APPLICANT: Katz, Lawrence C.
   TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR DIAGNOSING
   TITLE OF INVENTION: AND TREATING CONDITIONS, DISORDERS, OR DISEASES
INVOLVING
  TITLE OF INVENTION: CELL DEATH
  FILE REFERENCE: 10001-005-999
   CURRENT APPLICATION NUMBER: US/09/922,261
; CURRENT FILING DATE: 2001-08-03
  PRIOR APPLICATION NUMBER: US/09/461,697
  PRIOR FILING DATE: 1999-12-14
  NUMBER OF SEQ ID NOS: 466
   SOFTWARE: FastSEQ for Windows Version 4.0
  SEQ ID NO 330
    LENGTH: 7
    TYPE: PRT
    ORGANISM: Homo sapiens
US-09-922-261-330
  Query Match
                          60.0%; Score 3; DB 10; Length 7;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
  Matches
            3; Conservative 0; Mismatches
                                                0; Indels
                                                                0; Gaps
                                                                            0;
Qу
            2 SRL 4
              4 SRL 6
RESULT 27
US-09-968-561A-23
; Sequence 23, Application US/09968561A
; Patent No. US20020164642A1
; GENERAL INFORMATION:
; APPLICANT: Tomlinson, Ian M
; APPLICANT: Winter, Gregory
  TITLE OF INVENTION: Method to Screen Phage Display Libraries with Different
Ligands
  FILE REFERENCE: 8039/1073B
  CURRENT APPLICATION NUMBER: US/09/968,561A
  CURRENT FILING DATE: 2001-10-01
  PRIOR APPLICATION NUMBER: GB 9722131.1
  PRIOR FILING DATE: 1997-10-20
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Qу

2 SRL 4

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PRIOR APPLICATION NUMBER: US 60/065,248
 PRIOR FILING DATE: 1997-11-13
  PRIOR APPLICATION NUMBER: US 60/066,729
  PRIOR FILING DATE: 1997-11-21
  PRIOR APPLICATION NUMBER: PCT/GB98/03135
; PRIOR FILING DATE: 1998-10-20
; PRIOR APPLICATION NUMBER: US 09/511,939
; PRIOR FILING DATE: 2000-02-24
; NUMBER OF SEQ ID NOS: 350
  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 23
   LENGTH: 7
    TYPE: PRT
    ORGANISM: Homo sapiens
US-09-968-561A-23
  Query Match
                          60.0%; Score 3; DB 10; Length 7;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
  Matches
           3; Conservative 0; Mismatches
                                                                0; Gaps
                                                0; Indels
                                                                           0;
Qу
            2 SRL 4
              111
Db
            3 SRL 5
RESULT 28
US-09-968-561A-65
; Sequence 65, Application US/09968561A
; Patent No. US20020164642A1
; GENERAL INFORMATION:
  APPLICANT: Tomlinson, Ian M
  APPLICANT: Winter, Gregory
  TITLE OF INVENTION: Method to Screen Phage Display Libraries with Different
Ligands
; FILE REFERENCE: 8039/1073B
  CURRENT APPLICATION NUMBER: US/09/968,561A
  CURRENT FILING DATE: 2001-10-01
; PRIOR APPLICATION NUMBER: GB 9722131.1
; PRIOR FILING DATE: 1997-10-20
  PRIOR APPLICATION NUMBER: US 60/065,248
  PRIOR FILING DATE: 1997-11-13
  PRIOR APPLICATION NUMBER: US 60/066,729
  PRIOR FILING DATE: 1997-11-21
  PRIOR APPLICATION NUMBER: PCT/GB98/03135
  PRIOR FILING DATE: 1998-10-20
  PRIOR APPLICATION NUMBER: US 09/511,939
  PRIOR FILING DATE: 2000-02-24
; NUMBER OF SEQ ID NOS: 350
  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 65
   LENGTH: 7
   TYPE: PRT
   ORGANISM: Homo sapiens
US-09-968-561A-65
 Query Match
                         60.0%; Score 3; DB 10; Length 7;
 Best Local Similarity 100.0%; Pred. No. 6e+05;
```

```
Matches 3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                           0;
Qу
            2 SRL 4
              Db
            3 SRL 5
RESULT 29
US-09-968-561A-113
; Sequence 113, Application US/09968561A
; Patent No. US20020164642A1
; GENERAL INFORMATION:
; APPLICANT: Tomlinson, Ian M
  APPLICANT: Winter, Gregory
  TITLE OF INVENTION: Method to Screen Phage Display Libraries with Different
Ligands
; FILE REFERENCE: 8039/1073B
  CURRENT APPLICATION NUMBER: US/09/968,561A
  CURRENT FILING DATE: 2001-10-01
; PRIOR APPLICATION NUMBER: GB 9722131.1
; PRIOR FILING DATE: 1997-10-20
  PRIOR APPLICATION NUMBER: US 60/065,248
  PRIOR FILING DATE: 1997-11-13
; PRIOR APPLICATION NUMBER: US 60/066,729
; PRIOR FILING DATE: 1997-11-21
  PRIOR APPLICATION NUMBER: PCT/GB98/03135
  PRIOR FILING DATE: 1998-10-20
  PRIOR APPLICATION NUMBER: US 09/511,939
  PRIOR FILING DATE: 2000-02-24
; NUMBER OF SEQ ID NOS: 350
  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 113
   LENGTH: 7
   TYPE: PRT
   ORGANISM: Homo sapiens
US-09-968-561A-113
  Query Match
                         60.0%; Score 3; DB 10; Length 7;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
           3; Conservative 0; Mismatches 0; Indels
                                                            0; Gaps
                                                                        0;
Qу
           2 SRL 4
             Db
           3 SRL 5
RESULT 30
US-09-968-561A-155
; Sequence 155, Application US/09968561A
; Patent No. US20020164642A1
; GENERAL INFORMATION:
; APPLICANT: Tomlinson, Ian M
; APPLICANT: Winter, Gregory
; TITLE OF INVENTION: Method to Screen Phage Display Libraries with Different
Ligands
; FILE REFERENCE: 8039/1073B
; CURRENT APPLICATION NUMBER: US/09/968,561A
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; CURRENT FILING DATE: 2001-10-01
   PRIOR APPLICATION NUMBER: GB 9722131.1
  PRIOR FILING DATE: 1997-10-20
  PRIOR APPLICATION NUMBER: US 60/065,248
   PRIOR FILING DATE: 1997-11-13
  PRIOR APPLICATION NUMBER: US 60/066,729
 ; PRIOR FILING DATE: 1997-11-21
 ; PRIOR APPLICATION NUMBER: PCT/GB98/03135
; PRIOR FILING DATE: 1998-10-20
; PRIOR APPLICATION NUMBER: US 09/511,939
  PRIOR FILING DATE: 2000-02-24
; NUMBER OF SEQ ID NOS: 350
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 155
   LENGTH: 7
   TYPE: PRT
    ORGANISM: Homo sapiens
US-09-968-561A-155
  Query Match
                         60.0%; Score 3; DB 10; Length 7;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
            3; Conservative 0; Mismatches 0; Indels 0; Gaps
  Matches
Qу
            2 SRL 4
              Db
            3 SRL 5
RESULT 31
US-09-968-561A-161
; Sequence 161, Application US/09968561A
; Patent No. US20020164642A1
; GENERAL INFORMATION:
; APPLICANT: Tomlinson, Ian M
; APPLICANT: Winter, Gregory
; TITLE OF INVENTION: Method to Screen Phage Display Libraries with Different
Ligands
; FILE REFERENCE: 8039/1073B
; CURRENT APPLICATION NUMBER: US/09/968,561A
; CURRENT FILING DATE: 2001-10-01
  PRIOR APPLICATION NUMBER: GB 9722131.1
  PRIOR FILING DATE: 1997-10-20
  PRIOR APPLICATION NUMBER: US 60/065,248
  PRIOR FILING DATE: 1997-11-13
  PRIOR APPLICATION NUMBER: US 60/066,729
  PRIOR FILING DATE: 1997-11-21
  PRIOR APPLICATION NUMBER: PCT/GB98/03135
  PRIOR FILING DATE: 1998-10-20
  PRIOR APPLICATION NUMBER: US 09/511,939
  PRIOR FILING DATE: 2000-02-24
; NUMBER OF SEQ ID NOS: 350
  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 161
   LENGTH: 7
   TYPE: PRT
   ORGANISM: Homo sapiens
US-09-968-561A-161
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Query Match
                         60.0%; Score 3; DB 10; Length 7;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
           3; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
  Matches
            2 SRL 4
Qу
             Db
            3 SRL 5
RESULT 32
US-09-968-561A-167
; Sequence 167, Application US/09968561A
; Patent No. US20020164642A1
; GENERAL INFORMATION:
; APPLICANT: Tomlinson, Ian M
  APPLICANT: Winter, Gregory
  TITLE OF INVENTION: Method to Screen Phage Display Libraries with Different
Ligands
; FILE REFERENCE: 8039/1073B
; CURRENT APPLICATION NUMBER: US/09/968,561A
; CURRENT FILING DATE: 2001-10-01
; PRIOR APPLICATION NUMBER: GB 9722131.1
; PRIOR FILING DATE: 1997-10-20
; PRIOR APPLICATION NUMBER: US 60/065,248
; PRIOR FILING DATE: 1997-11-13
; PRIOR APPLICATION NUMBER: US 60/066,729
; PRIOR FILING DATE: 1997-11-21
 PRIOR APPLICATION NUMBER: PCT/GB98/03135
  PRIOR FILING DATE: 1998-10-20
  PRIOR APPLICATION NUMBER: US 09/511,939
  PRIOR FILING DATE: 2000-02-24
; NUMBER OF SEQ ID NOS: 350
 SOFTWARE: PatentIn version 3.1
; SEQ ID NO 167
   LENGTH: 7
    TYPE: PRT
    ORGANISM: Homo sapiens
US-09-968-561A-167
  Query Match
                        60.0%; Score 3; DB 10; Length 7;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
 Matches
          3; Conservative 0; Mismatches
                                               0; Indels
                                                              0; Gaps
                                                                          0;
Qу
           2 SRL 4
             Db
           3 SRL 5
RESULT 33
US-09-968-561A-173
; Sequence 173, Application US/09968561A
; Patent No. US20020164642A1
; GENERAL INFORMATION:
; APPLICANT: Tomlinson, Ian M
; APPLICANT: Winter, Gregory
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TITLE OF INVENTION: Method to Screen Phage Display Libraries with Different
Ligands
  FILE REFERENCE: 8039/1073B
   CURRENT APPLICATION NUMBER: US/09/968,561A
  CURRENT FILING DATE: 2001-10-01
  PRIOR APPLICATION NUMBER: GB 9722131.1
  PRIOR FILING DATE: 1997-10-20
  PRIOR APPLICATION NUMBER: US 60/065,248
  PRIOR FILING DATE: 1997-11-13
  PRIOR APPLICATION NUMBER: US 60/066,729
  PRIOR FILING DATE: 1997-11-21
  PRIOR APPLICATION NUMBER: PCT/GB98/03135
  PRIOR FILING DATE: 1998-10-20
  PRIOR APPLICATION NUMBER: US 09/511,939
  PRIOR FILING DATE: 2000-02-24
  NUMBER OF SEQ ID NOS: 350
  SOFTWARE: PatentIn version 3.1
 SEQ ID NO 173
   LENGTH: 7
    TYPE: PRT
    ORGANISM: Homo sapiens
US-09-968-561A-173
  Query Match
                          60.0%; Score 3; DB 10; Length 7;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
 Matches
          3; Conservative 0; Mismatches
                                                 0; Indels
                                                                0; Gaps
                                                                            0;
QУ
            2 SRL 4
Dh
            3 SRL 5
RESULT 34
US-09-968-561A-179
; Sequence 179, Application US/09968561A
; Patent No. US20020164642A1
; GENERAL INFORMATION:
; APPLICANT: Tomlinson, Ian M
  APPLICANT: Winter, Gregory
  TITLE OF INVENTION: Method to Screen Phage Display Libraries with Different
Ligands
; FILE REFERENCE: 8039/1073B
  CURRENT APPLICATION NUMBER: US/09/968,561A
  CURRENT FILING DATE: 2001-10-01
  PRIOR APPLICATION NUMBER: GB 9722131.1
  PRIOR FILING DATE: 1997-10-20
  PRIOR APPLICATION NUMBER: US 60/065,248
  PRIOR FILING DATE: 1997-11-13
  PRIOR APPLICATION NUMBER: US 60/066,729
  PRIOR FILING DATE: 1997-11-21
  PRIOR APPLICATION NUMBER: PCT/GB98/03135
  PRIOR FILING DATE: 1998-10-20
  PRIOR APPLICATION NUMBER: US 09/511,939
; PRIOR FILING DATE: 2000-02-24
; NUMBER OF SEQ ID NOS: 350
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 179
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LENGTH: 7
    TYPE: PRT
    ORGANISM: Homo sapiens
US-09-968-561A-179
  Query Match
                        60.0%; Score 3; DB 10; Length 7;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
            3; Conservative 0; Mismatches 0; Indels
                                                               0; Gaps
                                                                          0;
            2 SRL 4
Qу
              3 SRL 5
RESULT 35
US-09-968-561A-203
; Sequence 203, Application US/09968561A
; Patent No. US20020164642A1
; GENERAL INFORMATION:
; APPLICANT: Tomlinson, Ian M
  APPLICANT: Winter, Gregory
  TITLE OF INVENTION: Method to Screen Phage Display Libraries with Different
Ligands
; FILE REFERENCE: 8039/1073B
; CURRENT APPLICATION NUMBER: US/09/968,561A
; CURRENT FILING DATE: 2001-10-01
  PRIOR APPLICATION NUMBER: GB 9722131.1
  PRIOR FILING DATE: 1997-10-20
  PRIOR APPLICATION NUMBER: US 60/065,248
  PRIOR FILING DATE: 1997-11-13
  PRIOR APPLICATION NUMBER: US 60/066,729
  PRIOR FILING DATE: 1997-11-21
  PRIOR APPLICATION NUMBER: PCT/GB98/03135
; PRIOR FILING DATE: 1998-10-20
; PRIOR APPLICATION NUMBER: US 09/511,939
; PRIOR FILING DATE: 2000-02-24
; NUMBER OF SEQ ID NOS: 350
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 203
   LENGTH: 7
    TYPE: PRT
   ORGANISM: Homo sapiens
US-09-968-561A-203
 Query Match
                        60.0%; Score 3; DB 10; Length 7;
 Best Local Similarity 100.0%; Pred. No. 6e+05;
           3; Conservative 0; Mismatches 0; Indels
 Matches
                                                            0; Gaps
                                                                           0;
Qу
           2 SRL 4
             Db
           3 SRL 5
RESULT 36
US-09-968-561A-227
; Sequence 227, Application US/09968561A
; Patent No. US20020164642A1
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; GENERAL INFORMATION:
  APPLICANT: Tomlinson, Ian M
  APPLICANT: Winter, Gregory
  TITLE OF INVENTION: Method to Screen Phage Display Libraries with Different
Ligands
  FILE REFERENCE: 8039/1073B
  CURRENT APPLICATION NUMBER: US/09/968,561A
  CURRENT FILING DATE: 2001-10-01
; PRIOR APPLICATION NUMBER: GB 9722131.1
  PRIOR FILING DATE: 1997-10-20
  PRIOR APPLICATION NUMBER: US 60/065,248
  PRIOR FILING DATE: 1997-11-13
  PRIOR APPLICATION NUMBER: US 60/066,729
  PRIOR FILING DATE: 1997-11-21
  PRIOR APPLICATION NUMBER: PCT/GB98/03135
  PRIOR FILING DATE: 1998-10-20
  PRIOR APPLICATION NUMBER: US 09/511,939
  PRIOR FILING DATE: 2000-02-24
; NUMBER OF SEQ ID NOS: 350
  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 227
   LENGTH: 7
   TYPE: PRT
   ORGANISM: Homo sapiens
US-09-968-561A-227
  Query Match
                         60.0%; Score 3; DB 10; Length 7;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
 Matches
           3; Conservative 0; Mismatches
                                               0; Indels
                                                               0; Gaps
            2 SRL 4
Qу
             Db
           3 SRL 5
RESULT 37
US-09-968-561A-233
; Sequence 233, Application US/09968561A
; Patent No. US20020164642A1
; GENERAL INFORMATION:
 APPLICANT: Tomlinson, Ian M
  APPLICANT: Winter, Gregory
  TITLE OF INVENTION: Method to Screen Phage Display Libraries with Different
Ligands
; FILE REFERENCE: 8039/1073B
  CURRENT APPLICATION NUMBER: US/09/968,561A
  CURRENT FILING DATE: 2001-10-01
  PRIOR APPLICATION NUMBER: GB 9722131.1
  PRIOR FILING DATE: 1997-10-20
  PRIOR APPLICATION NUMBER: US 60/065,248
  PRIOR FILING DATE: 1997-11-13
  PRIOR APPLICATION NUMBER: US 60/066,729
  PRIOR FILING DATE: 1997-11-21
; PRIOR APPLICATION NUMBER: PCT/GB98/03135
; PRIOR FILING DATE: 1998-10-20
; PRIOR APPLICATION NUMBER: US 09/511,939
; PRIOR FILING DATE: 2000-02-24
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; NUMBER OF SEQ ID NOS: 350
  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 233
   LENGTH: 7
    TYPE: PRT
    ORGANISM: Homo sapiens
US-09-968-561A-233
  Query Match
                         60.0%; Score 3; DB 10; Length 7;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
 Matches
           3; Conservative 0; Mismatches
                                               0; Indels
                                                               0; Gaps
                                                                           0;
           2 SRL 4
Qу
           3 SRL 5
RESULT 38
US-09-968-561A-257
; Sequence 257, Application US/09968561A
; Patent No. US20020164642A1
; GENERAL INFORMATION:
; APPLICANT: Tomlinson, Ian M
  APPLICANT: Winter, Gregory
  TITLE OF INVENTION: Method to Screen Phage Display Libraries with Different
Ligands
  FILE REFERENCE: 8039/1073B
  CURRENT APPLICATION NUMBER: US/09/968,561A
  CURRENT FILING DATE: 2001-10-01
  PRIOR APPLICATION NUMBER: GB 9722131.1
  PRIOR FILING DATE: 1997-10-20
  PRIOR APPLICATION NUMBER: US 60/065,248
  PRIOR FILING DATE: 1997-11-13
  PRIOR APPLICATION NUMBER: US 60/066,729
  PRIOR FILING DATE: 1997-11-21
  PRIOR APPLICATION NUMBER: PCT/GB98/03135
  PRIOR FILING DATE: 1998-10-20
  PRIOR APPLICATION NUMBER: US 09/511,939
  PRIOR FILING DATE: 2000-02-24
  NUMBER OF SEQ ID NOS: 350
  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 257
   LENGTH: 7
   TYPE: PRT
   ORGANISM: Homo sapiens
US-09-968-561A-257
 Query Match
                         60.0%; Score 3; DB 10; Length 7;
 Best Local Similarity 100.0%; Pred. No. 6e+05;
 Matches
          3; Conservative 0; Mismatches
                                               0; Indels 0; Gaps
                                                                           0;
Qу
           2 SRL 4
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3 SRL 5

Db

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US-09-996-288-123
; Sequence 123, Application US/09996288
; Patent No. US20020177126A1
; GENERAL INFORMATION:
; APPLICANT: Young, James
; APPLICANT: Scott, Koenig
; APPLICANT: Leslie, Johnson
; TITLE OF INVENTION: Methods of Adminstering/Dosing Anti-RSV Antibodies for
Prophylaxis
  TITLE OF INVENTION: and Treatment
; FILE REFERENCE: 10271-047-999
; CURRENT APPLICATION NUMBER: US/09/996,288
; CURRENT FILING DATE: 2001-11-28
; NUMBER OF SEQ ID NOS: 259
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 123
   LENGTH: 7
    TYPE: PRT
    ORGANISM: Homo sapiens
US-09-996-288-123
  Query Match
                         60.0%; Score 3; DB 10; Length 7;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
  Matches 3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                          0;
            2 SRL 4
Qу
             111
Db
           3 SRL 5
RESULT 40
US-09-977-797A-34
; Sequence 34, Application US/09977797A
; Publication No. US20030044772A1
; GENERAL INFORMATION:
; APPLICANT: Watkins, Jeffrey D.
; APPLICANT: Huse, William D.
; APPLICANT: Wu, Herren
; TITLE OF INVENTION: Methods for Identifying Ligand Specific Binding Molecules
; FILE REFERENCE: AME-06805
  CURRENT APPLICATION NUMBER: US/09/977,797A
  CURRENT FILING DATE: 2002-06-25
  PRIOR APPLICATION NUMBER: 09/129,026
  PRIOR FILING DATE: 1998-08-04
  PRIOR APPLICATION NUMBER: 08/905,825
; PRIOR FILING DATE: 1997-08-04
; NUMBER OF SEQ ID NOS: 136
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 34
   LENGTH: 7
   TYPE: PRT
   ORGANISM: Homo sapiens
US-09-977-797A-34
 Query Match
                         60.0%; Score 3; DB 11; Length 7;
 Best Local Similarity 100.0%; Pred. No. 6e+05;
 Matches 3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                          0;
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Qу
          2 SRL 4
             Db
          3 SRL 5
RESULT 41
US-09-977-797A-42
; Sequence 42, Application US/09977797A
; Publication No. US20030044772A1
; GENERAL INFORMATION:
; APPLICANT: Watkins, Jeffrey D.
; APPLICANT: Huse, William D.
; APPLICANT: Wu, Herren
  TITLE OF INVENTION: Methods for Identifying Ligand Specific Binding Molecules
  FILE REFERENCE: AME-06805
  CURRENT APPLICATION NUMBER: US/09/977,797A
  CURRENT FILING DATE: 2002-06-25
; PRIOR APPLICATION NUMBER: 09/129,026
; PRIOR FILING DATE: 1998-08-04
; PRIOR APPLICATION NUMBER: 08/905,825
; PRIOR FILING DATE: 1997-08-04
; NUMBER OF SEO ID NOS: 136
  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 42
  LENGTH: 7
   TYPE: PRT
   ORGANISM: Homo sapiens
US-09-977-797A-42
  Query Match
                         60.0%; Score 3; DB 11; Length 7;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
 Matches
          3; Conservative 0; Mismatches 0; Indels
                                                               0; Gaps
           2 SRL 4
Qу
             111
Db
           3 SRL 5
RESULT 42
US-09-990-186-1558
; Sequence 1558, Application US/09990186
; Publication No. US20030068675A1
; GENERAL INFORMATION:
; APPLICANT: LIU, Qiang
 TITLE OF INVENTION: POSITION DEPENDENT RECOGNITION OF GNN NUCLEOTIDE
  TITLE OF INVENTION: TRIPLETS BY ZINC FINGERS
  FILE REFERENCE: 8325-0011.21 / S11-US3
  CURRENT APPLICATION NUMBER: US/09/990,186
  CURRENT FILING DATE: 2001-11-20
; NUMBER OF SEQ ID NOS: 4085
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 1558
  LENGTH: 7
   TYPE: PRT
   ORGANISM: Artificial Sequence
  FEATURE:
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; OTHER INFORMATION: Description of Artificial Sequence: example ZFP
US-09-990-186-1558
  Query Match
                         60.0%; Score 3; DB 11; Length 7;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
           3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                         0;
            2 SRL 4
QУ
             3 SRL 5
RESULT 43
US-09-563-222-39
; Sequence 39, Application US/09563222
; Publication No. US20030079253A1
; GENERAL INFORMATION:
; APPLICANT: Hiatt, Andrew
  APPLICANT: Hein, Mich B.
; TITLE OF INVENTION: IMMUNOGLOBULIN BINDING PROTEIN ARRAYS IN
; TITLE OF INVENTION: EUKARYOTIC CELLS
; FILE REFERENCE: 310098.406
; CURRENT APPLICATION NUMBER: US/09/563,222
; CURRENT FILING DATE: 2000-05-02
; NUMBER OF SEQ ID NOS: 197
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 39
   LENGTH: 7
   TYPE: PRT
   ORGANISM: Mus musculus
US-09-563-222-39
  Query Match
                       60.0%; Score 3; DB 11; Length 7;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
           3; Conservative 0; Mismatches 0; Indels 0; Gaps
 Matches
                                                                          0;
           2 SRL 4
Qу
             Db
           3 SRL 5
RESULT 44
US-09-996-265-123
; Sequence 123, Application US/09996265
; Publication No. US20030091584A1
; GENERAL INFORMATION:
; APPLICANT: Young, James
; APPLICANT: Scott, Koenig
; APPLICANT: Leslie, Johnson
  TITLE OF INVENTION: Methods of Adminstering/Dosing Anti-RSV Antibodies for
Prophylaxis
; TITLE OF INVENTION: and Treatment
; FILE REFERENCE: 10271-048-999
; CURRENT APPLICATION NUMBER: US/09/996,265
; CURRENT FILING DATE: 2001-11-28
; NUMBER OF SEQ ID NOS: 259
; SOFTWARE: PatentIn version 3.1
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; SEQ ID NO 123
    LENGTH: 7
    TYPE: PRT
    ORGANISM: Homo sapiens
US-09-996-265-123
  Query Match
                           60.0%; Score 3; DB 11; Length 7;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
  Matches
            3; Conservative 0; Mismatches 0; Indels 0; Gaps
Qу
            2 SRL 4
              Dh
            3 SRL 5
RESULT 45
US-09-954-385-18
; Sequence 18, Application US/09954385
; Publication No. US20030100467A1
; GENERAL INFORMATION:
; APPLICANT: Aehle, Wolfgang
; APPLICANT: Baldwin, Toby L.
  APPLICANT: Van Gastel, Franciscus J.C. APPLICANT: Janssen, Giselle G.
; APPLICANT: Murray, Christopher J.
; APPLICANT: Wang, Huaming
; APPLICANT: Winetzky, Deborah S.
  TITLE OF INVENTION: Binding Phenol Oxidizing Enzyme-peptide
  TITLE OF INVENTION: Complexes
  FILE REFERENCE: GC690
  CURRENT APPLICATION NUMBER: US/09/954,385
; CURRENT FILING DATE: 2001-09-12
; NUMBER OF SEQ ID NOS: 433
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 18
   LENGTH: 7
    TYPE: PRT
   ORGANISM: Artificial Sequence
    FEATURE:
    OTHER INFORMATION: binding peptide
US-09-954-385-18
  Query Match
                          60.0%; Score 3; DB 11; Length 7;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
  Matches
          3; Conservative 0; Mismatches
                                                 0; Indels
                                                                  0; Gaps
                                                                              0;
Qу
            2 SRL 4
              \parallel \parallel \parallel
Dh
            3 SRL 5
RESULT 46
US-09-989-994-1558
; Sequence 1558, Application US/09989994
; Publication No. US20030104526A1
; GENERAL INFORMATION:
; APPLICANT: LIU, Qiang
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TITLE OF INVENTION: POSITION DEPENDENT RECOGNITION OF GNN NUCLEOTIDE
; TITLE OF INVENTION: TRIPLETS BY ZINC FINGERS
; FILE REFERENCE: 8325-0011.20 / S11-US2
; CURRENT APPLICATION NUMBER: US/09/989.994
; CURRENT FILING DATE: 2001-11-20
; NUMBER OF SEQ ID NOS: 4085
; SOFTWARE: PatentIn Ver. 2.0
; SEO ID NO 1558
   LENGTH: 7
   TYPE: PRT
  ORGANISM: Artificial Sequence
; FEATURE:
; OTHER INFORMATION: Description of Artificial Sequence: example ZFP
US-09-989-994-1558
  Query Match
                         60.0%; Score 3; DB 11; Length 7;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
  Matches
          3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                          0;
           2 SRL 4
            Db
           3 SRL 5
RESULT 47
US-10-052-578-211
; Sequence 211, Application US/10052578
; Publication No. US20030134787A1
; GENERAL INFORMATION:
; APPLICANT: Sloan-Kettering Institute for Cancer Research
; APPLICANT: Rothman, James E.
; APPLICANT: Mayhew, Mark
; APPLICANT: Hoe, Mee H.
; APPLICANT: Houghton, Alan
; APPLICANT: Hartl, Ulrich
  APPLICANT: Ouerfelli, Ouathek
  APPLICANT: Moroi, Yoichi
; TITLE OF INVENTION: CONJUGATE HEAT SHOCK PROTEIN-BINDING PEPTIDES
; FILE REFERENCE: 11746/46003
; CURRENT APPLICATION NUMBER: US/10/052,578
; CURRENT FILING DATE: 2002-01-17
  PRIOR APPLICATION NUMBER: 08/961,707
  PRIOR FILING DATE: 1997-10-31
  NUMBER OF SEQ ID NOS: 321
; SOFTWARE: WordPerfect 8.0 for Windows
; SEQ ID NO 211
  LENGTH: 7
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: peptide in m13 coliphage
US-10-052-578-211
 Query Match
                        60.0%; Score 3; DB 12; Length 7;
 Best Local Similarity 100.0%; Pred. No. 6e+05;
         3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                         0;
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Qу
           2 SRL 4
              | | | |
Db
            2 SRL 4
RESULT 48
US-09-968-744A-23
; Sequence 23, Application US/09968744A
; Publication No. US20030148372A1
; GENERAL INFORMATION:
; APPLICANT: Tomlinson, Ian M
; APPLICANT: Winter, Gregory
   TITLE OF INVENTION: Method to Screen Phage Display Libraries with Different
Ligands
  FILE REFERENCE: 8039/1073
  CURRENT APPLICATION NUMBER: US/09/968,744A
  CURRENT FILING DATE: 2003-01-13
  PRIOR APPLICATION NUMBER: GB 9722131.1
  PRIOR FILING DATE: 1997-10-20
  PRIOR APPLICATION NUMBER: US 60/065,248
  PRIOR FILING DATE: 1997-11-13
  PRIOR APPLICATION NUMBER: US 60/066,729
  PRIOR FILING DATE: 1997-11-21
  PRIOR APPLICATION NUMBER: PCT/GB98/03135
  PRIOR FILING DATE: 1998-10-20
  PRIOR APPLICATION NUMBER: US 09/511,939
  PRIOR FILING DATE: 2000-02-24
  NUMBER OF SEQ ID NOS: 350
  SOFTWARE: PatentIn version 3.1
 SEQ ID NO 23
   LENGTH: 7
    TYPE: PRT
   ORGANISM: Homo sapiens
US-09-968-744A-23
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Qу
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US-09-968-744A-65
; Sequence 65, Application US/09968744A
; Publication No. US20030148372A1
; GENERAL INFORMATION:
  APPLICANT: Tomlinson, Ian M
; APPLICANT: Winter, Gregory
  TITLE OF INVENTION: Method to Screen Phage Display Libraries with Different
; FILE REFERENCE: 8039/1073
; CURRENT APPLICATION NUMBER: US/09/968,744A
; CURRENT FILING DATE: 2003-01-13
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; PRIOR APPLICATION NUMBER: GB 9722131.1

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; PRIOR FILING DATE: 1997-10-20
  PRIOR APPLICATION NUMBER: US 60/065,248
  PRIOR FILING DATE: 1997-11-13
  PRIOR APPLICATION NUMBER: US 60/066,729
; PRIOR FILING DATE: 1997-11-21
; PRIOR APPLICATION NUMBER: PCT/GB98/03135
; PRIOR FILING DATE: 1998-10-20
; PRIOR APPLICATION NUMBER: US 09/511,939
  PRIOR FILING DATE: 2000-02-24
; NUMBER OF SEQ ID NOS: 350
; SOFTWARE: PatentIn version 3.1
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US-09-968-744A-113
; Sequence 113, Application US/09968744A
; Publication No. US20030148372A1
; GENERAL INFORMATION:
; APPLICANT: Tomlinson, Ian M
; APPLICANT: Winter, Gregory
 TITLE OF INVENTION: Method to Screen Phage Display Libraries with Different
Ligands
; FILE REFERENCE: 8039/1073
; CURRENT APPLICATION NUMBER: US/09/968,744A
; CURRENT FILING DATE: 2003-01-13
  PRIOR APPLICATION NUMBER: GB 9722131.1
  PRIOR FILING DATE: 1997-10-20
  PRIOR APPLICATION NUMBER: US 60/065,248
  PRIOR FILING DATE: 1997-11-13
  PRIOR APPLICATION NUMBER: US 60/066,729
  PRIOR FILING DATE: 1997-11-21
  PRIOR APPLICATION NUMBER: PCT/GB98/03135
  PRIOR FILING DATE: 1998-10-20
  PRIOR APPLICATION NUMBER: US 09/511,939
; PRIOR FILING DATE: 2000-02-24
; NUMBER OF SEQ ID NOS: 350
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; SEQ ID NO 113
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US-09-968-744A-113
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Best Local Similarity 100.0%; Pred. No. 6e+05;
Matches 3; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 2 SRL 4 ||| Db 3 SRL 5

Search completed: November 28, 2003, 14:37:21

Job time : 30 secs

GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.

OM protein - protein search, using sw model

Run on: November 28, 2003, 14:28:24; Search time 20 Seconds

(without alignments)

24.042 Million cell updates/sec

Title: US-09-228-866-45

Perfect score: 5

Sequence: 1 XSRLX 5

Scoring table: OLIGO

Gapop 60.0 , Gapext 60.0

Searched: 283308 seqs, 96168682 residues

Word size : 0

Total number of hits satisfying chosen parameters: 4406

Minimum DB seq length: 5
Maximum DB seq length: 23

Post-processing: Listing first 100 summaries

Database : PIR_76:*

1: pirl:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1 2 3 4 5 6 7 8 9 10	3 3 3 3 3 3 3 3 3 3	60.0 60.0 60.0 60.0 60.0 60.0 60.0 60.0	11 12 15 15 16 16 17 17 17	2 1 2 2 2 2 2 2 2 2 2 2 2	PT0217 LFECPE PA0029 G41299 PH0770 S35627 A28587 JP0068 E28587 H53284 PC1324	T-cell receptor be pyrE leader peptid protein QA100012 - T-cell receptor al T-cell receptor be uvsX protein - pha T-cell receptor be ribosomal protein T-cell receptor be T-cell receptor be hypothetical prote
12 13	3 3	60.0 60.0	19 20	2 2	PC1322 C20554	hypothetical prote hemocyanin subunit

14	3	60.0	20	2	I67551	monocyte chemotact
15	3	60.0	22	2	S35624	uvsX protein - pha
16	2	40.0	5	2	T14910	hypothetical prote
17	2	40.0	5	2	S53595	hypothetical prote
18	2	40.0	5	2	PT0525	T-cell receptor be
19	2	40.0	5	2	PT0577	T-cell receptor be
20	2	40.0	5	2	PT0565	T-cell receptor be
21	2	40.0	5	2	PT0700	T-cell receptor be
22	2	40.0	6	2	B33932	Ig mu chain D reqi
23	2	40.0	6	2	PT0518	T-cell receptor be
24	2	40.0	6	2	PT0662	T-cell receptor be
25	2	40.0	7	2	S19630	ribosomal protein
26	2	40.0	7	2	ECMUCR	catch-relaxing pep
27	2	40.0	7	2	A15398	choline oxidase (E
28	2	40.0	7	2	PN0150	omega-gliadine 1'
29	2	40.0	7	2	A28340	myomodulin - Calif
30	2	40.0	7	2	PT0671	T-cell receptor be
31	2	40.0	7	2	PH0932	T-cell receptor be
32	2	40.0	8	1	LFSAME	probable msrA lead
33	2	40.0	8	2	PH1407	Ig heavy chain V r
34	2	40.0	8	2	T10077	hypothetical prote
35	2	40.0	8	2	PC4131	hypothetical prote
36	2	40.0	8	2	PL0162	paramyosin - north
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38	2	40.0	8	2	T13818	cytochrome oxidase
39	2	40.0	8	2	A59028	MHC class I histoc
40	2	40.0	9	2	B45796	dihydrolipoamide S
41	2	40.0	9	2	A61620	locustamyotropin I
42	2	40.0	9	2	S78762	ribosomal protein
43	2	40.0	9	2	S78420	ribosomal protein
44	2	40.0	10	2	B33710	ornithine decarbox
45	2	40.0	10	2	C39191	hypothetical prote
46	2	40.0	10	2	PC2044	beta-Kirilowin - M
47	2	40.0	10	2	S19296	16K protein - poul
48	2	40.0	10	2	PT0309	Ig heavy chain CRD
49	2	40.0	10	2	PT0212	T-cell receptor al
50	2	40.0	10	2	PH0894	T-cell receptor be
51	2	40.0	10	2	PH0926	T-cell receptor be
52	2	40.0	10	2	PH0895	T-cell receptor be
53	2	40.0	10	2	PC4374	telomeric and tetr
54	2	40.0	10	2	T17063	cytochrome-c oxida
55	2	40.0	11	2	A40693	transgelin - sheep
56	2	40.0	11	2	D58502	27K bile and gallb
57	2	40.0	11	2	S05002	corazonin - Americ
58	2	40.0	11	2	PT0273	Ig heavy chain CRD
59	2	40.0	11	2	S13279	Ile-Ser-bradykinin
60	2	40.0	11	2	PH1584	Ig H chain V-D-J r
61	2	40.0	11	2	PH0929	T-cell receptor be
62	2	40.0	11	2	PH0947	T-cell receptor be
63	2	40.0	11	2	PH0903	T-cell receptor be
64	2	40.0	11	2	PH0919	T-cell receptor be
65	2	40.0	11	4	I52708	ELAV-like neuronal
66	2	40.0	11	4	S41909	hypothetical prote
67	2	40.0	11	4	PC2124	aminotransferase c
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69	2	40.0	12	2	A29169	phospholipase A2 (
70	2	40.0	12	2	C49215	urease (EC 3.5.1.5

71	2	40.0	12	2	S26541	T-cell receptor be
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74	2	40.0	12	2	S26554	T-cell receptor be
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76	2	40.0	12	2	A44874	proboscipedia - fr
77	2	40.0	12	2	S29859	gene pl0 protein -
78	2	40.0	12	2	S71034	potB protein - Sal
79	2	40.0	12	2	D28551	hypothetical prote
80	2	40.0	12	2	S49547	hypothetical prote
81	2	40.0	12	2	A56878	light yellow cell
82	2	40.0	12	2	C61308	hemocyanin chain 6
83	2	40.0	12	2	A49637	MHC class II histo
84	2	40.0	12	2	A37933	Ig lambda chain J
85	2	40.0	12	2	C30503	Ig gamma-2b chain
86	2	40.0	12	2	PH1581	Ig H chain V-D-J r
87	2	40.0	12	2	PH0746	T-cell receptor be
88	2	40.0	12	2	A42324	cytochrome P450c27
89	2	40.0	12	2	PH0931	T-cell receptor be
90	2	40.0	12	2	S21163	NAD ADP-ribosyltra
91	2	40.0	13	2	A53608	neurotensin - guin
92	2	40.0	13	2	S78519	ribosomal protein
93	2	40.0	13	2	E39778	lactose phosphotra
94	2	40.0	13	2	JH0460	corticostatic pept
95	2	40.0	13	2	H44957	protein P18 - comm
96	2	40.0	13	2	B61620	locustamyotropin I
97	2	40.0	13	2	PT0256	Ig heavy chain CRD
98	2	40.0	13	2	PT0293	Ig heavy chain CRD
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ALIGNMENTS

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T-cell receptor beta chain V-J region (4-1-E.2) - mouse (fragment)
C; Species: Mus musculus (house mouse)
C;Date: 31-Dec-1991 #sequence_revision 31-Dec-1991 #text_change 30-May-1997
C; Accession: PT0217
R; Nakano, N.; Kikutani, H.; Nishimoto, H.; Kishimoto, T.
J. Exp. Med. 173, 1091-1097, 1991
A; Title: T cell receptor V gene usage of islet beta cell-reactive T cells is not
restricted in non-obese diabetic mice.
A; Reference number: PT0209; MUID: 91217621; PMID: 1902501
A; Accession: PT0217
A; Molecule type: mRNA
A; Residues: 1-11 < NAK>
C; Keywords: T-cell receptor
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Db
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RESULT 2
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pyrE leader peptide - Escherichia coli
C; Species: Escherichia coli
C;Date: 31-Mar-1990 #sequence revision 31-Mar-1990 #text change 31-Mar-1993
C; Accession: A30400; A05110; Q00495
R; Poulsen, P.; Bonekamp, F.; Jensen, K.F.
EMBO J. 3, 1783-1790, 1984
A; Title: Structure of the Escherichia coli pyrE operon and control of pyrE
expression by a UTP modulated intercistronic attentuation.
A; Reference number: A30400; MUID: 85003588; PMID: 6207018
A; Accession: A30400
A; Molecule type: DNA
A; Residues: 1-12 < POU1>
R; Poulsen, P.; Jensen, K.F.; Valentin-Hansen, P.; Carlsson, P.; Lundberg, L.G.
Eur. J. Biochem. 135, 223-229, 1983
A; Title: Nucleotide sequence of the Escherichia coli pyrE gene and of the DNA in
front of the protein-coding region.
A; Reference number: A05110; MUID: 83287414; PMID: 6349999
A; Accession: A05110
A; Molecule type: DNA
A; Residues: 1-12 < POU2>
C; Genetics:
A; Gene: pyrE-LP
A; Map position: 82 min
C; Superfamily: pyrE leader peptide
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PA0029
protein QA100012 - Arabidopsis thaliana (fragment)
C; Species: Arabidopsis thaliana (mouse-ear cress)
C;Date: 30-Jun-1992 #sequence_revision 06-Jan-1995 #text_change 06-Jun-1997
C; Accession: PA0029
R; Kamo, M.; Kawakami, T.; Miyatake, N.; Tsugita, A.
submitted to JIPID, July 1994
A; Description: Separation and characterization of Arabidopsis proteins by two-
dimensional gel electrophoresis.
A; Reference number: PA0001
A; Accession: PA0029
A; Molecule type: protein
A; Residues: 1-15 < KAM>
A; Experimental source: callus
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G41299
T-cell receptor alpha chain precursor J region (39) - human (fragment)
C; Species: Homo sapiens (man)
C; Date: 28-May-1992 #sequence revision 28-May-1992 #text change 05-Nov-1999
C; Accession: G41299
R; Uematsu, Y.; Wege, H.; Straus, A.; Ott, M.; Bannwarth, W.; Lanchbury, J.;
Panayi, G.; Steinmetz, M.
Proc. Natl. Acad. Sci. U.S.A. 88, 8534-8538, 1991
A; Title: The T-cell-receptor repertoire in the synovial fluid of a patient with
rheumatoid arthritis is polyclonal.
A; Reference number: A41299; MUID: 92020887; PMID: 1656449
A; Accession: G41299
A; Status: preliminary
A; Molecule type: mRNA
A; Residues: 1-15 <UEM>
A; Cross-references: GB: S57457; NID: q236330; PIDN: AAB19962.1; PID: q236331
C; Keywords: T-cell receptor
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QУ
              111
Db
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PH0770
T-cell receptor beta chain (L4) - mouse (fragment)
C; Species: Mus musculus (house mouse)
C;Date: 17-Jul-1992 #sequence revision 17-Jul-1992 #text change 05-Nov-1999
C; Accession: PH0770
R;Casanova, J.L.; Romero, P.; Widmann, C.; Kourilsky, P.; Maryanski, J.L.
J. Exp. Med. 174, 1371-1383, 1991
A; Title: T cell receptor genes in a series of class I major histocompatibility
complex-restricted cytotoxic T lymphocyte clones specific for a Plasmodium
berghei nonapeptide: implications for T cell allelic exclusion and antigen-
specific repertoire.
A; Reference number: PH0746; MUID: 92078846; PMID: 1836010
A; Accession: PH0770
A; Molecule type: mRNA
A; Residues: 1-15 < CAS>
A; Cross-references: EMBL: X60864; NID: g52855; PIDN: CAA43254.1; PID: g52856
A; Experimental source: T lymphocyte
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uvsX protein - phage T6 (fragment)
C; Species: phage T6
C;Date: 22-Nov-1993 #sequence_revision 26-May-1995 #text_change 08-Oct-1999
C; Accession: S35627
R; Winkler, M.; Rueger, W.
Nucleic Acids Res. 21, 1500, 1993
A; Title: Cloning and sequencing of the genes of beta-glucosyl-HMC-alpha-
glucosyl-transferase of bacteriophages T2 and T6.
A; Reference number: S35622; MUID: 93219141; PMID: 8464751
A; Accession: S35627
A; Status: preliminary; nucleic acid sequence not shown; translation not shown
A; Molecule type: DNA
A; Residues: 1-16 <WIN>
A;Cross-references: EMBL:X68725; NID:g296439; PIDN:CAA48668.1; PID:g296441
A; Note: the nucleotide sequence was submitted to the EMBL Data Library, October
1992
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              Db
            8 SRL 10
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A28587
T-cell receptor beta-2 chain J-B2.2 segment - human (fragment)
C; Species: Homo sapiens (man)
C;Date: 16-Aug-1988 #sequence_revision 16-Aug-1988 #text_change 05-Nov-1999
C; Accession: A28587
R; Toyonaga, B.; Yoshikai, Y.; Vadasz, V.; Chin, B.; Mak, T.W.
Proc. Natl. Acad. Sci. U.S.A. 82, 8624-8628, 1985
A; Title: Organization and sequences of the diversity, joining, and constant
region genes of the human T-cell receptor beta chain.
A; Reference number: A94081; MUID: 86094276; PMID: 3866244
A; Accession: A28587
A; Molecule type: DNA
A; Residues: 1-16 < TOY>
A;Cross-references: GB:M14159; NID:g338852; PIDN:AAA60676.1; PID:g553687
C; Keywords: T-cell receptor
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2 SRL 4

Qу

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Db
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RESULT 8
JP0068
ribosomal protein L30 - Thermomonospora curvata (fragment)
C; Species: Thermomonospora curvata
C; Date: 10-Mar-1994 #sequence revision 28-Oct-1994 #text_change 28-Oct-1994
C; Accession: JP0068
R;Ochi, K.
submitted to JIPID, February 1994
A; Description: Phylogenetic diversity in the genus Bacillus and comparative
ribosomal protein AT-L30 analyses of the genus Thermoactinomyces and relatives.
A; Reference number: JP0042
A; Accession: JP0068
A; Molecule type: protein
A; Residues: 1-17 <OCH>
C; Keywords: protein biosynthesis; ribosome
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T-cell receptor beta-2 chain J-B2.6 segment - human (fragment)
C; Species: Homo sapiens (man)
C;Date: 16-Aug-1988 #sequence_revision 16-Aug-1988 #text_change 05-Nov-1999
C; Accession: E28587
R; Toyonaga, B.; Yoshikai, Y.; Vadasz, V.; Chin, B.; Mak, T.W.
Proc. Natl. Acad. Sci. U.S.A. 82, 8624-8628, 1985
A; Title: Organization and sequences of the diversity, joining, and constant
region genes of the human T-cell receptor beta chain.
A; Reference number: A94081; MUID: 86094276; PMID: 3866244
A; Accession: E28587
A; Molecule type: DNA
A; Residues: 1-17 < TOY>
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QУ
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          12 SRL 14
Db
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RESULT 10 H53284 111

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T-cell receptor beta 2 chain J region, Jbeta2.6 - rabbit
C; Species: Oryctolagus cuniculus (domestic rabbit)
C;Date: 02-May-1994 #sequence revision 18-Nov-1994 #text change 05-Nov-1999
C; Accession: H53284
R; Harindranath, N.; Alexander, C.B.; Mage, R.G.
Mol. Immunol. 28, 881-888, 1991
A; Title: Evolutionarily conserved organization and sequences of germline
diversity and joining regions of the rabbit T-cell receptor beta 2 chain.
A; Reference number: A53284; MUID: 91342695; PMID: 1678859
A; Accession: H53284
A; Status: preliminary
A; Molecule type: DNA
A; Residues: 1-17 < HAR>
A;Cross-references: GB:S60737; NID:g233916; PIDN:AAB19524.1; PID:g233924
A; Note: sequence extracted from NCBI backbone (NCBIN:60737, NCBIP:60746)
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               Db
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PC1324
hypothetical protein 19 - curled-leaved tobacco chloroplast (fragment)
C; Species: chloroplast Nicotiana plumbaginifolia (curled-leaved tobacco)
C;Date: 03-May-1994 #sequence_revision 07-Oct-1994 #text_change 24-Feb-1995
C; Accession: PC1324
R; Fejes, E.; Engler, D.; Maliga, P.
Theor. Appl. Genet. 79, 28-32, 1990
A; Title: Extensive homologous chloroplast DNA recombination in the pt14
Nicotiana somatic hybrid.
A; Reference number: PC1321
A; Accession: PC1324
A; Molecule type: DNA
A; Residues: 1-19 <FEJ>
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A;Genome: chloroplast
C; Keywords: chloroplast
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hypothetical protein 19 - common tobacco chloroplast (fragment)
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C; Accession: PC1322
R; Fejes, E.; Engler, D.; Maliga, P.
Theor. Appl. Genet. 79, 28-32, 1990
A; Title: Extensive homologous chloroplast DNA recombination in the pt14
Nicotiana somatic hybrid.
A; Reference number: PC1321
A; Accession: PC1322
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A; Residues: 1-19 <FEJ>
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C; Keywords: chloroplast
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RESULT 13
C20554
hemocyanin subunit IIa - Atlantic horseshoe crab (fragment)
C; Species: Limulus polyphemus (Atlantic horseshoe crab)
C;Date: 05-Jun-1987 #sequence_revision 05-Jun-1987 #text_change 09-May-1997
C; Accession: C20554
R;Lamy, J.; Lamy, J.; Sizaret, P.Y.; Billiald, P.; Jolles, P.; Jolles, J.;
Feldmann, R.J.; Bonaventura, J.
Biochemistry 22, 5573-5583, 1983
A; Title: Quaternary structure of Limulus polyphemus hemocyanin.
A; Reference number: A90478
A; Accession: C20554
A; Molecule type: protein
A; Residues: 1-20 < LAM>
C; Comment: Limulus polyphemus hemocyanin is an association of eight different
subunits within eight heterohexamers. Approximately 2 chains of subunit IIa are
found in the 48-mer.
C; Superfamily: hemocyanin
  Query Match
                          60.0%; Score 3; DB 2; Length 20;
  Best Local Similarity 100.0%; Pred. No. 1.1e+03;
          3; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
                                                                               0:
            2 SRL 4
Qу
              \parallel \parallel \parallel
            7 SRL 9
RESULT 14
I67551
monocyte chemotactic protein - human (fragment)
C; Species: Homo sapiens (man)
C;Date: 29-May-1998 #sequence_revision 29-May-1998 #text_change 21-Jul-2000
C; Accession: 167551
```

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R; Steenbergen, E.J.; Verhagen, O.J.; van Leeuwen, E.F.; Behrendt, H.; Merle,
 P.A.; Wester, M.R.; von dem Borne, A.E.; van der Schoot, C.E.
Eur. J. Immunol. 24, 900-908, 1994
A; Title: B precursor acute lymphoblastic leukemia third complementarity-
determining regions predominantly represent an unbiased recombination
repertoire: leukemic transformation frequently occurs in fetal life.
A; Reference number: I53401; MUID: 94200227; PMID: 8149961
A; Accession: I67551
A; Status: preliminary; translated from GB/EMBL/DDBJ
A; Molecule type: DNA
A; Residues: 1-20 < RES>
A;Cross-references: GB:S69743; NID:g546304; PIDN:AAD14041.1; PID:g4261741
C; Genetics:
A; Gene: IqH VDJ
  Query Match
                          60.0%; Score 3; DB 2; Length 20;
  Best Local Similarity 100.0%; Pred. No. 1.1e+03;
            3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                              0;
            2 SRL 4
QУ
              Db
           16 SRL 18
RESULT 15
S35624
uvsX protein - phage T2 (fragment)
C; Species: phage T2
C;Date: 22-Nov-1993 #sequence_revision 26-May-1995 #text_change 08-Oct-1999
C; Accession: S35624
R; Winkler, M.; Rueger, W.
Nucleic Acids Res. 21, 1500, 1993
A; Title: Cloning and sequencing of the genes of beta-glucosyl-HMC-alpha-
glucosyl-transferase of bacteriophages T2 and T6.
A; Reference number: S35622; MUID: 93219141; PMID: 8464751
A; Accession: S35624
A; Status: preliminary; nucleic acid sequence not shown; translation not shown
A; Molecule type: DNA
A; Residues: 1-22 <WIN>
A; Cross-references: EMBL: X68724; NID: g296435; PIDN: CAA48665.1; PID: g296438
A; Note: the nucleotide sequence was submitted to the EMBL Data Library, October
1992
  Query Match
                          60.0%; Score 3; DB 2; Length 22;
  Best Local Similarity
                          100.0%; Pred. No. 1.2e+03;
  Matches
           3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                             0:
Qу
           2 SRL 4
              Db
           8 SRL 10
RESULT 16
T14910
hypothetical protein - parsley
C; Species: Petroselinum crispum (parsley)
C;Date: 20-Sep-1999 #sequence_revision 20-Sep-1999 #text_change 21-Jul-2000
```

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C; Accession: T14910
R; Kircher, S.; Ledger, S.; Hayashi, H.; Weisshaar, B.; Schafer, E.; Frohnmeyer,
Mol. Gen. Genet. 257, 595-605, 1998
A; Title: CPRF4a, a novel plant bZIP protein of the CPRF family: comparative
analysis of light dependent expression, post-transcriptional regulation, nuclear
import and heterodimerisation.
A; Reference number: Z18261; MUID: 98265918; PMID: 9604882
A; Accession: T14910
A; Status: preliminary; translated from GB/EMBL/DDBJ
A; Molecule type: mRNA
A; Residues: 1-5 < KIR>
A; Cross-references: EMBL: Y10810; NID: g3336904; PIDN: CAA71769.1; PID: g3336905
A; Experimental source: ssp. Hamburger Schnitt
  Query Match
                          40.0%; Score 2; DB 2; Length 5;
  Best Local Similarity 100.0%; Pred. No. 2.8e+05;
           2; Conservative 0; Mismatches 0; Indels
  Matches
                                                                0; Gaps
                                                                              0;
            2 SR 3
Qу
              Db
            3 SR 4
RESULT 17
S53595
hypothetical protein (upstream of transcription factor, CCAAT-binding) - chicken
C; Species: Gallus gallus (chicken)
C;Date: 15-Jul-1995 #sequence_revision 01-Sep-1995 #text_change 07-May-1999
C; Accession: S53595
R; Calkhoven, C.F.; Bouwman, P.R.J.; Snippe, L.; Ab, G.
Nucleic Acids Res. 22, 5540-5547, 1994
A; Title: Translation start site multiplicity of the CCAAT/enhancer binding
protein alpha mRNA is dictated by a small 5' open reading frame.
A; Reference number: S53595; MUID: 95140613; PMID: 7838705
A; Accession: S53595
A; Status: preliminary
A; Molecule typė: DNA
A; Residues: 1-5 <CAL>
A; Cross-references: EMBL: X66844
  Query Match
                          40.0%; Score 2; DB 2; Length 5;
  Best Local Similarity
                          100.0%; Pred. No. 2.8e+05;
           2; Conservative 0; Mismatches 0; Indels 0; Gaps
  Matches
                                                                             0;
Qу
            3 RL 4
              | | |
Db
            4 RL 5
RESULT 18
PT0525
T-cell receptor beta chain V-D-J region (100-4J) - mouse (fragment)
C; Species: Mus musculus (house mouse)
C;Date: 17-Jul-1992 #sequence_revision 17-Jul-1992 #text_change 30-May-1997
C; Accession: PT0525
R; Feeney, A.J.
```

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J. Exp. Med. 174, 115-124, 1991
A; Title: Junctional sequences of fetal T cell receptor beta chains have few N
regions.
A; Reference number: PT0509; MUID: 91277601; PMID: 1711558
A; Accession: PT0525
A; Status: translation not shown
A; Molecule type: mRNA
A; Residues: 1-5 <FEE>
A; Experimental source: adult thymus, strain BALB/c
C; Keywords: T-cell receptor
  Query Match
                          40.0%; Score 2; DB 2; Length 5;
  Best Local Similarity 100.0%; Pred. No. 2.8e+05;
            2; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
                                                                            0;
            2 SR 3
Qу
Db
            2 SR 3
RESULT 19
PT0577
T-cell receptor beta chain V-D-J region (141-1BC) - mouse (fragment)
C; Species: Mus musculus (house mouse)
C;Date: 17-Jul-1992 #sequence revision 17-Jul-1992 #text_change 30-May-1997
C; Accession: PT0577; PT0574
R; Feeney, A.J.
J. Exp. Med. 174, 115-124, 1991
A; Title: Junctional sequences of fetal T cell receptor beta chains have few N
regions.
A; Reference number: PT0509; MUID: 91277601; PMID: 1711558
A; Accession: PT0577
A; Status: translation not shown
A; Molecule type: mRNA
A; Residues: 1-5 <FEE>
A; Experimental source: day 19 fetal thymus, strain BALB/c, clone 141-1BC
A; Accession: PT0574
A; Status: translation not shown
A; Molecule type: mRNA
A; Residues: 1-5 <FE2>
A; Experimental source: day 19 fetal thymus, strain BALB/c, clone 141-10
C; Keywords: T-cell receptor
  Query Match
                          40.0%; Score 2; DB 2; Length 5;
  Best Local Similarity 100.0%; Pred. No. 2.8e+05;
  Matches
           2; Conservative 0; Mismatches 0; Indels 0; Gaps
            2 SR 3
Qу
              Dh
           3 SR 4
RESULT 20
PT0565
T-cell receptor beta chain V-D-J region (141-1CF) - mouse (fragment)
C; Species: Mus musculus (house mouse)
C;Date: 17-Jul-1992 #sequence_revision 17-Jul-1992 #text_change 30-May-1997
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C; Accession: PT0565
R; Feeney, A.J.
J. Exp. Med. 174, 115-124, 1991
A; Title: Junctional sequences of fetal T cell receptor beta chains have few N
A; Reference number: PT0509; MUID: 91277601; PMID: 1711558
A; Accession: PT0565
A; Status: translation not shown
A; Molecule type: mRNA
A; Residues: 1-5 <FEE>
A; Experimental source: day 19 fetal thymus, strain BALB/c
C; Keywords: T-cell receptor
  Query Match
                          40.0%; Score 2; DB 2; Length 5;
  Best Local Similarity 100.0%; Pred. No. 2.8e+05;
            2; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
            2 SR 3
QУ
             3 SR 4
Db
RESULT 21
PT0700
T-cell receptor beta chain V-D-J region (161-2A) - mouse (fragment)
C; Species: Mus musculus (house mouse)
C;Date: 17-Jul-1992 #sequence revision 17-Jul-1992 #text_change 30-May-1997
C; Accession: PT0700
R; Feeney, A.J.
J. Exp. Med. 174, 115-124, 1991
A; Title: Junctional sequences of fetal T cell receptor beta chains have few N
A; Reference number: PT0509; MUID: 91277601; PMID: 1711558
A; Accession: PT0700
A; Status: translation not shown
A; Molecule type: DNA
A; Residues: 1-5 <FEE>
A; Experimental source: newborn thymus, strain BALB/c
C; Keywords: T-cell receptor
  Query Match
                          40.0%; Score 2; DB 2; Length 5;
  Best Local Similarity 100.0%; Pred. No. 2.8e+05;
          2; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                             0;
            2 SR 3
Qу
              Db
           3 SR 4
RESULT 22
B33932
Ig mu chain D region (D23) - mouse
C; Species: Mus musculus (house mouse)
C;Date: 09-Mar-1990 #sequence_revision 09-Mar-1990 #text_change 16-Aug-1996
C; Accession: B33932
R; Baccala, R.; Vo Quang, T.; Gilbert, M.; Ternynck, T.; Avrameas, S.
Proc. Natl. Acad. Sci. U.S.A. 86, 4624-4628, 1989
```

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A; Title: Two murine natural polyreactive autoantibodies are encoded by
nonmutated germ-line genes.
A; Reference number: A33932; MUID: 89282823; PMID: 2499887
A; Accession: B33932
A; Status: preliminary
A; Molecule type: mRNA
A; Residues: 1-6 <BAC>
A; Cross-references: GB:M27107
C; Keywords: immunoglobulin
  Query Match
                          40.0%; Score 2; DB 2; Length 6;
  Best Local Similarity 100.0%; Pred. No. 2.8e+05;
  Matches
           2; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                             0 :
           3 RL 4
QУ
              4 RL 5
Db
RESULT 23
PT0518
T-cell receptor beta chain V-D-J region (100-4B) - mouse (fragment)
C; Species: Mus musculus (house mouse)
C;Date: 17-Jul-1992 #sequence revision 17-Jul-1992 #text change 30-May-1997
C; Accession: PT0518
R; Feeney, A.J.
J. Exp. Med. 174, 115-124, 1991
A; Title: Junctional sequences of fetal T cell receptor beta chains have few N
regions.
A; Reference number: PT0509; MUID: 91277601; PMID: 1711558
A: Accession: PT0518
A; Status: translation not shown
A; Molecule type: mRNA
A, Residues: 1-6 <FEE>
A; Experimental source: adult thymus, strain BALB/c
C; Keywords: T-cell receptor
  Ouery Match
                          40.0%; Score 2; DB 2; Length 6;
  Best Local Similarity 100.0%; Pred. No. 2.8e+05;
  Matches
           2; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                             0;
            2 SR 3
Qу
              11
            2 SR 3
Db
RESULT 24
PT0662
T-cell receptor beta chain V-D-J region (121-3BA) - mouse (fragment)
C; Species: Mus musculus (house mouse)
C;Date: 17-Jul-1992 #sequence_revision 17-Jul-1992 #text_change 30-May-1997
C; Accession: PT0662
R; Feeney, A.J.
J. Exp. Med. 174, 115-124, 1991
A; Title: Junctional sequences of fetal T cell receptor beta chains have few N
regions.
A; Reference number: PT0509; MUID: 91277601; PMID: 1711558
```

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A; Accession: PT0662
A; Status: translation not shown
A; Molecule type: mRNA
A; Residues: 1-6 <FEE>
A; Experimental source: day 4 postnatal thymus, strain BALB/c
C; Keywords: T-cell receptor
  Query Match
                           40.0%; Score 2; DB 2; Length 6;
  Best Local Similarity
                          100.0%; Pred. No. 2.8e+05;
  Matches
            2; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
                                                                              0;
Qу
            2 SR 3
              | | |
Db
            2 SR 3
RESULT 25
S19630
ribosomal protein L30 - Streptomyces griseus (fragment)
C; Species: Streptomyces griseus
C;Date: 12-Feb-1993 #sequence revision 12-Feb-1993 #text change 06-Jun-1997
C; Accession: S19630
R;Ochi, K.
Int. J. Syst. Bacteriol. 42, 144-150, 1992
A; Title: Electrophoretic heterogeneity of ribosomal protein AT-L30 among
actinomycete genera.
A; Reference number: S19630; MUID: 92144363; PMID: 1736962
A; Accession: S19630
A; Molecule type: protein
A; Residues: 1-7 < OCH>
A; Experimental source: strain IFO 13189
C; Superfamily: Escherichia coli ribosomal protein L30
C; Keywords: protein biosynthesis; ribosome
  Query Match
                          40.0%; Score 2; DB 2; Length 7;
  Best Local Similarity
                          100.0%; Pred. No. 2.8e+05;
            2; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                              0;
Qу
            3 RL 4
            2 RL 3
RESULT 26
ECMUCR
catch-relaxing peptide - blue mussel
N; Alternate names: CARP
C; Species: Mytilus edulis (blue mussel)
C;Date: 20-Jun-2000 #sequence_revision 20-Jun-2000 #text change 20-Jun-2000
C; Accession: A29342
R; Hirata, T.; Kubota, I.; Takabatake, I.; Kawahara, A.; Shimamoto, N.; Muneoka,
Υ.
Brain Res. 422, 374-376, 1987
A; Title: Catch-relaxing peptide isolated from Mytilus pedal ganglia.
A; Reference number: A29342; MUID: 88052022; PMID: 3676797
A; Accession: A29342
A; Molecule type: protein
```

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A; Residues: 1-7 < HIR>
C; Comment: This peptide exhibits both potentiating (contraction) and inhibitory
(relaxation) effects on the anterior byssus retractor muscle.
C; Superfamily: unassigned animal peptides
C; Keywords: amidated carboxyl end; hormone; retractor muscle
F;7/Modified site: amidated carboxyl end (Leu) #status experimental
  Query Match
                          40.0%; Score 2; DB 2; Length 7;
  Best Local Similarity
                          100.0%; Pred. No. 2.8e+05;
           2; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
Qу
            3 RL 4
              6 RL 7
Db
RESULT 27
A15398
choline oxidase (EC 1.1.3.17) - Alcaligenes sp. (tentative sequence) (fragment)
C; Species: Alcaligenes sp.
C;Date: 05-Jun-1987 #sequence revision 05-Jun-1987 #text change 31-Mar-2000
C; Accession: A15398
R;Ohta-Fukuyama, M.; Miyake, Y.; Emi, S.; Yamano, T.
J. Biochem. 88, 197-203, 1980
A; Title: Identification and properties of the prosthetic group of choline
oxidase from Alcaligenes sp.
A; Reference number: A15398; MUID: 81006769; PMID: 6997283
A; Accession: A15398
A; Molecule type: protein
A; Residues: 1-7 < OHT>
C; Keywords: oxidoreductase
  Query Match
                          40.0%; Score 2; DB 2; Length 7;
  Best Local Similarity
                          100.0%; Pred. No. 2.8e+05;
  Matches
           2; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                             0;
Qу
            2 SR 3
            6 SR 7
Dh
RESULT 28
PN0150
omega-gliadine 1' - Aegilops longissima (fragment)
C; Species: Aegilops longissima
C;Date: 30-Sep-1993 #sequence revision 30-Sep-1993 #text change 07-May-1999
C; Accession: PN0150
R;Odintsova, T.I.; Egorov, T.A.
Biokhimiia 55, 509-516, 1990
A; Title: N-Terminal sequences of omega-gliadins of Aegilops longissima: On the
origin of polyploid wheat genomes.
A; Reference number: PN0146; MUID: 90283493; PMID: 2354218
A; Accession: PN0150
A; Molecule type: protein
A; Residues: 1-7 < ODI >
A; Experimental source: strain K-907
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Query Match
                          40.0%; Score 2; DB 2; Length 7;
  Best Local Similarity 100.0%; Pred. No. 2.8e+05;
  Matches
            2; Conservative 0; Mismatches 0; Indels 0; Gaps
QУ
            2 SR 3
              - 11
Db
            1 SR 2
RESULT 29
A28340
myomodulin - California sea hare
C; Species: Aplysia californica (California sea hare)
C;Date: 30-Jun-1989 #sequence_revision 30-Jun-1989 #text change 18-Jun-1993
C; Accession: A28340
R; Cropper, E.C.; Tenenbaum, R.; Kolks, M.A.G.; Kupfermann, I.; Weiss, K.R.
Proc. Natl. Acad. Sci. U.S.A. 84, 5483-5486, 1987
A; Title: Myomodulin: A bioactive neuropeptide present in an identified
cholinergic buccal motor neuron of Aplysia.
A; Reference number: A28340; MUID: 87261010; PMID: 3474664
A; Accession: A28340
A; Molecule type: protein
A; Residues: 1-7 < CRO>
  Query Match
                          40.0%; Score 2; DB 2; Length 7;
  Best Local Similarity 100.0%; Pred. No. 2.8e+05;
  Matches
            2; Conservative 0; Mismatches 0; Indels
                                                               0; Gaps
                                                                            0;
Qу
            3 RL 4
              Db
            6 RL 7
RESULT 30
PT0671
T-cell receptor beta chain V-D-J region - mouse (fragment)
C; Species: Mus musculus (house mouse)
C;Date: 17-Jul-1992 #sequence_revision 17-Jul-1992 #text change 04-Mar-2000
C; Accession: PT0671; PT0564; PT0537; PT0536; PT0682
R; Feeney, A.J.
J. Exp. Med. 174, 115-124, 1991
A; Title: Junctional sequences of fetal T cell receptor beta chains have few N
regions.
A; Reference number: PT0509; MUID: 91277601; PMID: 1711558
A; Accession: PT0671
A; Status: translation not shown
A; Molecule type: DNA
A; Residues: 1-7 < FEE>
A; Experimental source: day 18 fetal thymus, strain BALB/c, clone 140-1K
A; Accession: PT0564
A; Status: translation not shown
A; Molecule type: mRNA
A; Residues: 1-6 <FE1>
A; Experimental source: day 19 fetal thymus, strain BALB/c, clone 141-1CE
A; Accession: PT0537
A; Status: translation not shown
A; Molecule type: mRNA
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A; Residues: 1-6 <FE2>
A; Experimental source: adult thymus, strain BALB/c, clone 126-1CH
A; Accession: PT0536
A; Status: translation not shown
A; Molecule type: mRNA
A; Residues: 1-3 <FE3>
A; Experimental source: adult thymus, strain BALB/c, clone 126-1CC
A; Accession: PT0682
A; Status: translation not shown
A; Molecule type: DNA
A; Residues: 1-3 <FE4>
A; Experimental source: day 18 fetal thymus, strain BALB/c, clone 140-1B
C; Keywords: T-cell receptor
  Query Match
                          40.0%; Score 2; DB 2; Length 7;
  Best Local Similarity 100.0%; Pred. No. 2.8e+05;
  Matches
            2; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
            2 SR 3
Qу
Db
            2 SR 3
RESULT 31
PH0932
T-cell receptor beta chain V-D-J region (clone 3) - rat (fragment)
C; Species: Rattus norvegicus (Norway rat)
C;Date: 09-Oct-1992 #sequence revision 09-Oct-1992 #text_change 30-May-1997
C; Accession: PH0932
R;Gold, D.P.; Offner, H.; Sun, D.; Wiley, S.; Vandenbark, A.A.; Wilson, D.B.
J. Exp. Med. 174, 1467-1476, 1991
A; Title: Analysis of T cell receptor beta chains in Lewis rats with experimental
allergic encephalomyelitis: conserved complementarity determining region 3.
A; Reference number: PH0891; MUID: 92078857; PMID: 1836012
A; Accession: PH0932
A; Molecule type: mRNA
A; Residues: 1-7 <GOL>
A; Experimental source: complete Freund's adjuvant-immunized lymph node
C; Keywords: T-cell receptor
  Query Match
                          40.0%; Score 2; DB 2; Length 7;
  Best Local Similarity 100.0%; Pred. No. 2.8e+05;
           2; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
Qу
           3 RL 4
Db
            6 RL 7
RESULT 32
LFSAME
probable msrA leader peptide - Staphylococcus epidermidis
C; Species: Staphylococcus epidermidis
C;Date: 30-Sep-1991 #sequence_revision 30-Sep-1991 #text_change 16-Jul-1999
C; Accession: S11157
R; Ross, J.I.; Eady, E.A.; Cove, J.H.; Cunliffe, W.J.; Baumberg, S.; Wootton,
J.C.
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Mol. Microbiol. 4, 1207-1214, 1990
A; Title: Inducible erythromycin resistance in staphylococci is encoded by a
member of the ATP-binding transport super-gene family.
A; Reference number: S11157; MUID: 91041730; PMID: 2233255
A; Accession: S11157
A; Molecule type: DNA
A; Residues: 1-8 < ROS>
A; Cross-references: EMBL: X52085; NID: g47000; PIDN: CAA36303.1; PID: g581653
C; Superfamily: probable msrA leader peptide
  Query Match
                          40.0%; Score 2; DB 1; Length 8;
  Best Local Similarity 100.0%; Pred. No. 2.8e+05;
  Matches
            2; Conservative
                               0; Mismatches
                                                 0; Indels 0; Gaps
                                                                              0;
QУ
            3 RL 4
Db
            6 RL 7
RESULT 33
PH1407
Ig heavy chain V region (clone micro m+ 46-6 PCR) - mouse (fragment)
C; Species: Mus musculus (house mouse)
C;Date: 31-Dec-1993 #sequence_revision 31-Dec-1993 #text change 17-Mar-1999
C; Accession: PH1407
R; Shirasawa, T.; Miyazoe, I.; Hagiwara, S.; Kimoto, H.; Shigemoto, K.;
Taniguchi, M.; Takemori, T.
J. Exp. Med. 176, 1209-1214, 1992
A; Title: Heavy chain variable (VH) region diversity generated by VH gene
replacement in the progeny of a single precursor cell transformed with a
temperature-sensitive mutant of abelson murine leukemia virus.
A; Reference number: PH1403; MUID: 93018837; PMID: 1402663
A; Accession: PH1407
A; Molecule type: DNA
A; Residues: 1-8 <SHI>
C; Superfamily: immunoglobulin V region; immunoglobulin homology
C; Keywords: heterotetramer; immunoglobulin
  Query Match
                          40.0%; Score 2; DB 2; Length 8;
  Best Local Similarity
                          100.0%; Pred. No. 2.8e+05;
            2; Conservative 0; Mismatches
  Matches
                                                 0; Indels
                                                                  0; Gaps
                                                                              0;
            3 RL 4
Qу
              11
Db
            4 RL 5
RESULT 34
T10077
hypothetical protein N - Methylophilus methylotrophus (fragment)
C; Species: Methylophilus methylotrophus
C;Date: 16-Jul-1999 #sequence_revision 16-Jul-1999 #text_change 21-Jul-2000
C; Accession: T10077
R; Chistoserdov, A.Y.; McIntire, W.S.; Mathews, F.S.; Lidstrom, M.E.
J. Bacteriol. 176, 4073-4080, 1994
A; Title: Organization of the methylamine utilization (mau) genes in
Methylophilus methylotrophus W3A1-NS.
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A; Reference number: Z16936; MUID: 94292427; PMID: 8021188
A; Accession: T10077
A; Status: preliminary; translated from GB/EMBL/DDBJ
A; Molecule type: DNA
A; Residues: 1-8 < CHI >
A; Cross-references: EMBL: L26407; NID: g561931; PIDN: AAB46955.1; PID: g561933
A; Experimental source: strain W3A1
C; Genetics:
A; Gene: mauN
  Query Match
                          40.0%; Score 2; DB 2; Length 8;
  Best Local Similarity 100.0%; Pred. No. 2.8e+05;
  Matches
            2; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
                                                                              0;
Qу
            3 RL 4
Db
            3 RL 4
RESULT 35
PC4131
hypothetical protein 8 [imported] - Pseudomonas aeruginosa (fragment)
C; Species: Pseudomonas aeruginosa
C;Date: 20-Apr-2000 #sequence revision 20-Apr-2000 #text change 20-Apr-2000
C; Accession: PC4131
R; Kawasaki, S.; Arai, H.; Igarashi, Y.; Kodama, T.
Gene 167, 87-91, 1995
A; Title: Sequencing and characterization of the downstream region of the genes
encoding nitrite reductase and cytochrome c-551 (nirSM) from Pseudomonas
aeruginosa: Identification of the gene necessary for biosynthesis of heme dl.
A; Reference number: JC4552; MUID: 96144254; PMID: 8566817
A; Accession: PC4131
A; Status: preliminary
A; Molecule type: DNA
A; Residues: 1-8 < KAW>
A; Cross-references: DDBJ:D50473; NID:g1217594
A; Note: this ORF is not annotated in GenBank entry PSENIRC, release 113.0
  Query Match
                          40.0%; Score 2; DB 2; Length 8;
  Best Local Similarity 100.0%; Pred. No. 2.8e+05;
          2; Conservative 0; Mismatches
                                                 0; Indels 0; Gaps
                                                                              0;
Qу
            2 SR 3
Db
            5 SR 6
RESULT 36
PL0162
paramyosin - northern quahog (fragment)
C; Species: Mercenaria mercenaria (northern quahog)
C;Date: 31-Dec-1990 #sequence revision 31-Dec-1990 #text change 11-May-2000
C; Accession: PL0162
R; Watabe, S.; Tsuchiya, T.; Hartshorne, D.J.
Comp. Biochem. Physiol. B 94, 813-821, 1989
A; Title: Phosphorylation of paramyosin.
A; Reference number: PL0162; MUID: 90107385; PMID: 2532591
```

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A; Accession: PL0162
A; Molecule type: protein
A; Residues: 1-8 <WAT>
A; Experimental source: white adductor muscle
A; Note: the sequence is the phosphorylated tryptic peptide
C; Comment: This protein is thought to exist as a dimer of two subunits, termed
alpha-paramyosin. Alpha-paramyosin is degraded by proteolysis to beta-paramyosin
which involves the loss of a segment from the carboxyl-terminal end of the
molecule. Only alpha-paramyosin is phosphorylated by an endogenous kinase.
C; Keywords: muscle; phosphoprotein
F;5/Binding site: phosphate (Ser) (covalent) #status experimental
  Query Match
                          40.0%; Score 2; DB 2; Length 8;
  Best Local Similarity 100.0%; Pred. No. 2.8e+05;
  Matches 2; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                             0;
            2 SR 3
Qу
              -11
Db
            1 SR 2
RESULT 37
A23967
leucopyrokinin - Madeira cockroach
C; Species: Leucophaea maderae (Madeira cockroach)
C;Date: 31-Mar-1988 #sequence revision 26-May-1994 #text_change 11-Jul-1997
C; Accession: A23967
R; Nachman, R.J.; Holman, G.M.; Cook, B.J.
Biochem. Biophys. Res. Commun. 137, 936-942, 1986
A; Title: Active fragments and analogs of the insect neuropeptide leucopyrokinin:
structure-function studies.
A; Reference number: A23967; MUID: 86269041; PMID: 3015140
A; Accession: A23967
A; Molecule type: protein
A; Residues: 1-8 < NAC>
C; Keywords: amidated carboxyl end; neuropeptide; pyroglutamic acid
F;1/Modified site: pyrrolidone carboxylic acid (Gln) #status experimental
F;8/Modified site: amidated carboxyl end (Leu) #status experimental
  Query Match
                          40.0%; Score 2; DB 2; Length 8;
  Best Local Similarity 100.0%; Pred. No. 2.8e+05;
  Matches
           2; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                             0:
            3 RL 4
Qу
             Db
           7 RL 8
RESULT 38
T13818
cytochrome oxidase subunit I - Atlantic hagfish mitochondrion (fragment)
C; Species: mitochondrion Myxine glutinosa (Atlantic hagfish)
C;Date: 20-Sep-1999 #sequence_revision 20-Sep-1999 #text change 21-Jul-2000
C; Accession: T13818
R; Delarbre, C.; Barriel, V.; Tillier, S.; Janvier, P.; Gachelin, G.
Mol. Biol. Evol. 14, 807-813, 1997
```

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A; Title: The main features of the craniate mitochondrial DNA between the ND1 and
the COI genes were establihed in the common ancestor with the lancelet.
A; Reference number: Z17775; MUID: 97398704; PMID: 9254918
A; Accession: T13818
A; Status: preliminary; translated from GB/EMBL/DDBJ
A; Molecule type: DNA
A; Residues: 1-8 < DEL>
A; Cross-references: EMBL: Y09527; NID: g2340019; PIDN: CAA70718.1; PID: g2340022
C:Genetics:
A; Genome: mitochondrion
A; Note: COI
C; Keywords: mitochondrion
  Query Match
                          40.0%; Score 2; DB 2; Length 8;
  Best Local Similarity 100.0%; Pred. No. 2.8e+05;
  Matches
            2; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
            2 SR 3
Qу
              Db
            4 SR 5
RESULT 39
A59028
MHC class I histocompatibility antigen HLA-C alpha chain - human (fragment)
C; Species: Homo sapiens (man)
C;Date: 31-Dec-2001 #sequence revision 31-Dec-2001 #text change 31-Dec-2001
C; Accession: A59028
R; Escolano, J.M.
submitted to the Protein Sequence Database, August 1998
A; Reference number: A59028
A; Accession: A59028
A; Molecule type: protein
A; Residues: 1-8 < ESC>
C; Keywords: glycoprotein; heterodimer; transmembrane protein; transplantation
antigen
  Query Match
                          40.0%; Score 2; DB 2; Length 8;
  Best Local Similarity 100.0%; Pred. No. 2.8e+05;
            2; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                             0;
Qу
            2 SR 3
              Db
            7 SR 8
RESULT 40
B45796
dihydrolipoamide S-succinyltransferase (EC 2.3.1.61) - Pseudomonas fluorescens
(fragment)
C; Species: Pseudomonas fluorescens
C;Date: 14-May-1993 #sequence revision 14-May-1993 #text change 05-May-2000
C:Accession: B45796
R; Benen, J.A.E.; Van Berkel, W.J.H.; Van Dongen, W.M.A.M.; Mueller, F.; De Kok,
J. Gen. Microbiol. 135, 1787-1797, 1989
```

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A; Title: Molecular cloning and sequence determination of the lpd gene encoding
lipoamide dehydrogenase from Pseudomonas fluorescens.
A; Reference number: A45796; MUID: 90132584; PMID: 2515251
A; Accession: B45796
A; Status: preliminary
A; Molecule type: DNA
A; Residues: 1-9 <BEN>
A; Cross-references: GB: M28356; NID: q151343; PIDN: AAA99233.1; PID: q151344
C; Superfamily: dihydrolipoamide acetyltransferase; lipoyl/biotin-binding
homology
C; Keywords: acyltransferase; coenzyme A; lipoamide; tricarboxylic acid cycle
  Query Match
                          40.0%; Score 2; DB 2; Length 9;
  Best Local Similarity 100.0%; Pred. No. 2.8e+05;
  Matches
          2; Conservative 0; Mismatches
                                                 0; Indels 0; Gaps
                                                                             0;
            3 RL 4
Qу
Db
            4 RL 5
RESULT 41
A61620
locustamyotropin III - migratory locust
C; Species: Locusta migratoria (migratory locust)
C;Date: 21-Jul-1995 #sequence revision 28-Jul-1995 #text change 11-Jul-1997
C; Accession: A61620
R;Schoofs, L.; Holman, G.M.; Hayes, T.K.; Nachman, R.J.; Kochansky, J.P.; De
Loof, A.
Insect Biochem. Mol. Biol. 22, 447-452, 1992
A; Title: Isolation, identification and synthesis of locustamyotropin III and IV,
two additional neuropeptides of Locusta migratoria: members of the
locustamyotropin peptide family.
A; Reference number: A61620
A; Accession: A61620
A; Status: preliminary
A; Molecule type: protein
A; Residues: 1-9 <SCH>
C; Keywords: amidated carboxyl end; neuropeptide
F;9/Modified site: amidated carboxyl end (Leu) #status experimental
                          40.0%; Score 2; DB 2; Length 9;
  Best Local Similarity
                          100.0%; Pred. No. 2.8e+05;
  Matches
           2; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                             0:
            3 RL 4
Qу
             Db
           8 RL 9
RESULT 42
S78762
ribosomal protein MRP-S12, mitochondrial - bovine (fragment)
C; Species: Bos primigenius taurus (cattle)
C;Date: 20-Sep-1999 #sequence_revision 20-Sep-1999 #text_change 20-Sep-1999
C; Accession: S78762
R; Graack, H.R.
```

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submitted to the Protein Sequence Database, July 1999
A; Reference number: S78760
A; Accession: S78762
A; Molecule type: protein
A; Residues: 1-9 < GRA>
C; Keywords: mitochondrion
F;1-9/Product: ribosomal protein MRP-S12 (fragment) #status experimental <MAT>
  Query Match
                          40.0%; Score 2; DB 2; Length 9;
  Best Local Similarity
                          100.0%; Pred. No. 2.8e+05;
  Matches
            2; Conservative 0; Mismatches
                                                 0; Indels
                                                                  0; Gaps
                                                                              0;
Qу
            3 RL 4
            8 RL 9
Db
RESULT 43
S78420
ribosomal protein RL41, mitochondrial [validated] - rat (fragment)
C; Species: Rattus norvegicus (Norway rat)
C;Date: 25-Feb-1998 #sequence_revision 13-Mar-1998 #text_change 21-Jul-2000
C; Accession: S78420
R; Goldschmidt-Reisin, S.; Graack, H.R.
submitted to the Protein Sequence Database, February 1998
A; Reference number: S78411
A; Accession: S78420
A; Molecule type: protein
A; Residues: 1-9 <GOL>
A; Note: the protein is designated as mitochondrial ribosomal protein L41
C; Keywords: mitochondrion; protein biosynthesis; ribosome
  Query Match
                          40.0%; Score 2; DB 2; Length 9;
  Best Local Similarity
                          100.0%; Pred. No. 2.8e+05;
            2; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                              0;
Qу
            3 RL 4
              \perp
Db
            6 RL 7
RESULT 44
B33710
ornithine decarboxylase leader peptide - rat
C; Species: Rattus norvegicus (Norway rat)
C;Date: 27-Feb-1990 #sequence_revision 27-Feb-1990 #text_change 24-Sep-1999
C; Accession: B33710
R; Wen, L.; Huang, J.K.; Blackshear, P.J.
J. Biol. Chem. 264, 9016-9021, 1989
A; Title: Rat ornithine decarboxylase gene. Nucleotide sequence, potential
regulatory elements, and comparison to the mouse gene.
A; Reference number: A33710; MUID: 89255378; PMID: 2722815
A; Accession: B33710
A; Status: preliminary; nucleic acid sequence not shown; not compared with
conceptual translation
A; Molecule type: mRNA
A; Residues: 1-10 <WEN>
```

```
A; Cross-references: GB: J04791; NID: g205807; PIDN: AAA66163.1; PID: g806309
C; Superfamily: unassigned leader peptides
  Query Match
                          40.0%; Score 2; DB 2; Length 10;
  Best Local Similarity 100.0%; Pred. No. 7.9e+03;
            2; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
                                                                              0;
Qу
            2 SR 3
               11
Db
            5 SR 6
RESULT 45
C39191
hypothetical protein 1 (Tetx 5' region) - Bacteroides fragilis
C; Species: Bacteroides fragilis
C;Date: 08-Nov-1991 #sequence_revision 08-Nov-1991 #text_change 30-Sep-1993
C; Accession: C39191
R; Speer, B.S.; Bedzyk, L.; Salyers, A.A.
J. Bacteriol. 173, 176-183, 1991
A; Title: Evidence that a novel tetracycline resistance gene found on two
Bacteroides transposons encodes an NADP-requiring oxidoreductase.
A; Reference number: A39191; MUID: 91100280; PMID: 1846135
A; Accession: C39191
A; Status: preliminary; not compared with conceptual translation
A; Molecule type: DNA
A; Residues: 1-10 <SPE>
A; Cross-references: GB: M37699
  Query Match
                          40.0%; Score 2; DB 2; Length 10;
  Best Local Similarity 100.0%; Pred. No. 7.9e+03;
          2; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                              0;
            2 SR 3
Qу
Db
            4 SR 5
RESULT 46
beta-Kirilowin - Mongolian snake-gourd (fragment)
C; Species: Trichosanthes kirilowii (Mongolian snake-gourd)
C;Date: 14-Jul-1994 #sequence_revision 14-Jul-1994 #text_change 17-Mar-1999
C; Accession: PC2044
R; Dong, T.X.; Ng, T.B.; Yeung, H.W.; Wong, R.N.S.
Biochem. Biophys. Res. Commun. 199, 387-393, 1994
A; Title: Isolation and characterization of a novel ribosome-inactivating
protein, beta-kirilowin, from the seeds of Trichosanthes kirilowii.
A; Reference number: PC2044; MUID: 94168605; PMID: 8123040
A; Accession: PC2044
A; Molecule type: protein
A; Residues: 1-10 < DON>
A; Experimental source: seed
C; Comment: This protein exhibited strong abortifacient activity, and is a
ribosome inactivating protein.
C; Keywords: seed
```

```
Query Match
                          40.0%; Score 2; DB 2; Length 10;
  Best Local Similarity 100.0%; Pred. No. 7.9e+03;
  Matches
           2; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                            0;
            3 RL 4
Qy
              Db
            6 RL 7
RESULT 47
S19296
16K protein - poulard wheat
C; Species: Triticum turgidum (poulard wheat)
C;Date: 19-Mar-1997 #sequence_revision 19-Mar-1997 #text change 24-Jul-1997
C; Accession: S19296
R; Sanchez-Monge, R.; Gomez, L.; Barber, D.; Lopez-Otin, C.; Armentia, A.;
Salcedo, G.
Biochem. J. 281, 401-405, 1992
A; Title: Wheat and barley allergens associated with baker's asthma. Glycosylated
subunits of the alpha-amylase-inhibitor family have enhanced IgE-binding
capacity.
A; Reference number: S19296; MUID: 92143804; PMID: 1736890
A; Accession: S19296
A; Status: preliminary
A; Molecule type: protein
A; Residues: 1-10 <SAN>
  Query Match
                          40.0%; Score 2; DB 2; Length 10;
  Best Local Similarity 100.0%; Pred. No. 7.9e+03;
          2; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
                                                                             0;
QУ
            2 SR 3
Db
            1 SR 2
RESULT 48
PT0309
Ig heavy chain CRD3 region (clone 6-94) - human (fragment)
C; Species: Homo sapiens (man)
C; Date: 30-Sep-1993 #sequence revision 30-Sep-1993 #text change 16-Aug-1996
C; Accession: PT0309
R; Yamada, M.; Wasserman, R.; Reichard, B.A.; Shane, S.; Caton, A.J.; Rovera, G.
J. Exp. Med. 173, 395-407, 1991
A; Title: Preferential utilization of specific immunoglobulin heavy chain
diversity and joining segments in adult human peripheral blood B lymphocytes.
A; Reference number: PT0222; MUID: 91108337; PMID: 1899102
A; Accession: PT0309
A; Molecule type: DNA
A; Residues: 1-10 < YAM>
A; Experimental source: B lymphocyte
C; Keywords: heterotetramer; immunoglobulin
  Query Match
                          40.0%; Score 2; DB 2; Length 10;
  Best Local Similarity
                         100.0%; Pred. No. 7.9e+03;
  Matches
            2; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
                                                                             0;
```

```
Qу
            2 SR 3
Db
            6 SR 7
RESULT 49
PT0212
T-cell receptor alpha chain V-J region (4-1-E.2) - mouse (fragment)
C; Species: Mus musculus (house mouse)
C;Date: 31-Dec-1991 #sequence_revision 31-Dec-1991 #text_change 30-May-1997
C; Accession: PT0212
R; Nakano, N.; Kikutani, H.; Nishimoto, H.; Kishimoto, T.
J. Exp. Med. 173, 1091-1097, 1991
A; Title: T cell receptor V gene usage of islet beta cell-reactive T cells is not
restricted in non-obese diabetic mice.
A; Reference number: PT0209; MUID: 91217621; PMID: 1902501
A; Accession: PT0212
A; Molecule type: mRNA
A; Residues: 1-10 < NAK>
C; Keywords: T-cell receptor
  Query Match
                          40.0%; Score 2; DB 2; Length 10;
  Best Local Similarity
                          100.0%; Pred. No. 7.9e+03;
  Matches
            2; Conservative 0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0;
Qу
            3 RL 4
Dh
            9 RL 10
RESULT 50
PH0894
T-cell receptor beta chain V-D-J region (clone 5) - rat (fragment)
C; Species: Rattus norvegicus (Norway rat)
C;Date: 09-Oct-1992 #sequence revision 09-Oct-1992 #text change 30-May-1997
C; Accession: PH0894
R;Gold, D.P.; Offner, H.; Sun, D.; Wiley, S.; Vandenbark, A.A.; Wilson, D.B.
J. Exp. Med. 174, 1467-1476, 1991
A; Title: Analysis of T cell receptor beta chains in Lewis rats with experimental
allergic encephalomyelitis: conserved complementarity determining region 3.
A; Reference number: PH0891; MUID: 92078857; PMID: 1836012
A; Accession: PH0894
A; Molecule type: mRNA
A; Residues: 1-10 <GOL>
A; Experimental source: myelin basic protein-immunized T-cell
C; Keywords: T-cell receptor
  Query Match
                          40.0%; Score 2; DB 2; Length 10;
  Best Local Similarity
                          100.0%; Pred. No. 7.9e+03;
            2; Conservative 0; Mismatches
 Matches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0;
            3 RL 4
Qу
              11
Db
            9 RL 10
Search completed: November 28, 2003, 14:32:38
Job time : 23 secs
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GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.

OM protein - protein search, using sw model

Run on: November 28, 2003, 14:26:13; Search time 11 Seconds

(without alignments)

21.376 Million cell updates/sec

Title: US-09-228-866-45

Perfect score: 5

Sequence: 1 XSRLX 5

Scoring table: OLIGO

Gapop 60.0 , Gapext 60.0

Searched: 127863 seqs, 47026705 residues

Word size : 0

Total number of hits satisfying chosen parameters: 1411

Minimum DB seq length: 5
Maximum DB seq length: 23

Post-processing: Listing first 100 summaries

Database : SwissProt_41:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB	ID	Description
1	3	60.0	12	1	YZPY ECOLI	P17776 escherichia
2	3	60.0	16	1	UVSX BPT6	Q06728 bacteriopha
3	3	60.0	22	1	UVSX BPT2	Q06727 bacteriopha
4	2	40.0	7	1	CARP MYTED	P10420 mytilus edu
5	2	40.0	7	1	CHOX ALCSP	P16101 alcaligenes
6	2	40.0	8	1	ALL3 CYDPO	P82154 cydia pomon
7	2	40.0	8	1	FAR4 MACRS	P83277 macrobrachi
8	2	40.0	8	1	LMT2_LOCMI	P22396 locusta mig
9	2	40.0	8	1	LPK LEUMA	P13049 leucophaea
10	2	40.0	8	1	LPMS STAEP	P23211 staphylococ
11	2	40.0	8	1	PPK2 PERAM	P82692 periplaneta
12	2	40.0	8	1	PPK3_PERAM	P82618 periplaneta
13	2	40.0	9	1	FAR3 PENMO	P83318 penaeus mon
14	2	40.0	9	1	FAR4 PENMO	P83319 penaeus mon
15	2	40.0	9	1	FAR5 PENMO	P83320 penaeus mon
16	2	40.0	9	1	LMT3 LOCMI	P41489 locusta mig
17	2	40.0	9	1	PPK1_PERAM	P82691 periplaneta

18	2	40.0	10	1	AKHX_LOCMI	P81626	5 locusta mig
19	2	40.0	10	1	FAR5_MACRS	P83278	3 macrobrachi
20	2	40.0	10	1	GS09_BACSU	P80243	B bacillus su
21	2	40.0	10	1	LPK2_LOCMI	P41488	B locusta mig
22	2	40.0	10	1	MALE_KLEPN		klebsiella
23	2	40.0	10	1	RT02_BOVIN	P82923	B bos taurus
24	2	40.0	10	1	TKU1_UREUN	P4075	l urechis uni
25	2	40.0	11	1	CORZ_PERAM	P11496	5 periplaneta
26	2	40.0	11	1	FAR6_PENMO		l penaeus mon
27	2	40.0	11	1	PKC1_CARMO	P82684	carausius m
28	2	40.0	12	1	LMT1_LOCMI		locusta mig
29	2	40.0	12	1	PPK4_PERAM		periplaneta
30	2	40.0	12	1	PPK4_PERFU	P82690) periplaneta
31	2	40.0	12	1	RR16_GINBI		ginkgo bilo
32	2	40.0	13	1	LMT4_LOCMI) locusta mig
33	2	40.0	13	1	NEUT_CAVPO	P32560) cavia porce
34	2	40.0	14	1	ALYT_ALYOB	P08944	alytes obst
35	2	40.0	14	1	KLPS_SCARA	P58396	scaptocosa
36	2	40.0	14	1	LPER_BACLI		B bacillus li
37	2	40.0	14	1	PPK6_PERAM	P82693	periplaneta
38	2	40.0	14	1	SAP2_ARBPU		arbacia pun
39	2	40.0	15	1	CX3B_CONQU		conus querc
40	2	40.0	15	1	RS10_BACST	P59683	B bacillus st
41	2	40.0	15	1	TA1 TREBR	P34070	tremella br
42	2	40.0	15	1	UC13_MAIZE		ezea mays (m
43	2	40.0	15	1	UC25_MAIZE		zea mays (m
44	2	40.0	15	1	URE1_MORMO		morganella
45	2	40.0	16	1	AF2S_MALPA		malva parvi
46	2	40.0	16	1	FOR1_MYRGU		myrmecia gu
47	2	40.0	16	1	FOR2_MYRGU		'myrmecia gu
48	2	40.0	16	1	LPK1_LOCMI		locusta mig
49	2	40.0	16	1	PGTL_PELAC		pelobacter
50	2	40.0	16	1	YMOR_PSEPU		pseudomonas
51	2	40.0	17	1	APID_BOMPA		bombus pasc
52	2	40.0	17	1	PA2_AUSSU	P59066	austrelaps
53	2	40.0	17	1	PC24 BRANA		brassica na
54	2	40.0	17	1	PPK5_PERAM	P82617	periplaneta
55	2	40.0	17	1	RM35_YEAST		saccharomyc
56	2	40.0	17	1	SP51_BACLI		bacillus li
57	2	40.0	18	1	ALL2_CYDPO		cydia pomon
58	2	40.0	18	1	GOME_ACAGO	P82358	acanthoscur
59	2	40.0	18	1	PHPT_PSESE	P25271	pseudaletia
60	2	40.0	18	1	YAA5_RHOPA	Q02005	rhodopseudo
61	2	40.0	19	1	FIBB_LAMGL		lama glama
62	2	40.0	19	1	HI70_RAT	P21794	rattus norv
63	2	40.0	19	1	UKA1_HUMAN	P31940	homo sapien
64	2	40.0	20	1	AROQ_AMYME	P46380	amycolatops
65	2	40.0	20	1	CLPB_ACICA	P82956	acinetobact
66	2	40.0	20	1	FLAW_AZOVI	P52964	azotobacter
67	2	40.0	20	1	FRHA_METBA	P80489	methanosarc
68	2	40.0	20	1	PL2_LUPLU	P83364	lupinus lut
69	2	40.0	20	1	PL4_LUPLU	P83366	lupinus lut
70	2	40.0	20	1	UCRQ_EQUAR	P81247	equisetum a
71	2	40.0	20	1	VMO2_CHICK	Q9ps49	gallus gall
72	2	40.0	21	1	FA71_TETPY		tetrahymena
73	2	40.0	21	1	FIBB_ANTAM	P14465	antilocapra
74	2	40.0	21	1	LPRM_CORDI	P21232	corynebacte

75	2	40.0	21	1	MCT3 MOUSE	P21843	mus musculu
76	2	40.0	21	1	OMP1 HAEPR		haemophilus
77	2	40.0	21	1	REV HV2D2		human immun
78	2	40.0	22	1	ANFC CHICK		gallus gall
79	2	40.0	22	1	CO4 CAVPO		cavia porce
80	2	40.0	22	1	CPI4_SOLTU		solanum tub
81	2	40.0	22	1	KORB METTM		methanobact
82	2	40.0	22	1	LPL_CORGL		corynebacte
83	2	40.0	22	1	RL41_METJA		methanococc
84	2	40.0	23	1	ALL5_HORSE	P82616	equus cabal
85	2	40.0	23	1	BR1B_RANES		rana escule
86	2	40.0	23	1	GLNA_PHOLP	P20479	phormidium
87	2	40.0	23	1	IAPP_LEPEU	Q07333	lepus europ
88	2	40.0	23	1	PQQA_KLEPN		klebsiella
89	2	40.0	23	1	T2A_PARTE	Q27173	paramecium
90	2	40.0	23	1	T2B_PARTE	Q27174	paramecium
91	2	40.0	23	1	TL17_SPIOL	P81778	spinacia ol
92	2	40.0	23	1	TYPH_LACRH	P19663	lactobacill
93	2	40.0	23	1	UDP_LACRH	P19662	lactobacill
94	1	20.0	5	1	AL14_CARMA	P81817	carcinus ma
95	1	20.0	5	1	BIOB_CITFR	P12997	citrobacter
96	1	20.0	5	1	FARP_ARTTR	P41853	artioposthi
97	1	20.0	5	1	PRCT_PERAM	P01373	periplaneta
98	1	20.0	5	1	UF01_MOUSE	P38639	mus musculu
99	1	20.0	5	1	UXA4_CHLTR	P38005	chlamydia t
100	1	20.0	6	1	ACPH_RABIT	P25154	oryctolagus

ALIGNMENTS

```
RESULT 1
YZPY ECOLI
ID
    YZPY ECOLI
                    STANDARD;
                                    PRT;
                                            12 AA.
AC
     P17776;
\mathsf{DT}
     01-AUG-1990 (Rel. 15, Created)
     01-AUG-1990 (Rel. 15, Last sequence update)
DT
DT
     01-AUG-1992 (Rel. 23, Last annotation update)
DE
     Hypothetical pyrE leader peptide.
GN
     PYRL OR PYRE-LP.
OS
     Escherichia coli.
OC
     Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
OC
     Enterobacteriaceae; Escherichia.
     NCBI TaxID=562;
OX
RN
     [1]
RP
     SEQUENCE FROM N.A.
     MEDLINE=85003588; PubMed=6207018;
RX
RA
     Poulsen P., Bonekamp F., Jensen K.F.;
RT
     "Structure of the Escherichia coli pyrE operon and control of pyrE
     expression by a UTP modulated intercistronic attentuation.";
RT
RL
     EMBO J. 3:1783-1790(1984).
RN
     [2]
     SEQUENCE FROM N.A.
RΡ
RC
     STRAIN=K12;
    MEDLINE=83287414; PubMed=6349999;
RX
RA
    Poulsen P., Jensen K.F., Valentin-Hansen P., Carlsson P.,
RA
    Lundberg L.G.;
```

```
"Nucleotide sequence of the Escherichia coli pyrE gene and of the DNA
RT
     in front of the protein-coding region.";
RL
     Eur. J. Biochem. 135:223-229(1983).
CC
     -!- CAUTION: THIS SEQUENCE, ACCORDING TO THE ECOSEQ DATABASE (K. RUDD)
        IS PROBABLY NOT A REAL PROTEIN; THEREFORE THIS ENTRY WILL PROBABLY
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        BE DELETED IN FUTURE RELEASES.
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     or send an email to license@isb-sib.ch).
     ______
CC
DR
     EMBL; X00781; -; NOT ANNOTATED CDS.
DR
    EMBL; V01578; -; NOT ANNOTATED CDS.
DR
    PIR; A30400; LFECPE.
KW
    Hypothetical protein.
    SEQUENCE 12 AA; 1542 MW; C4291FA437A2C9C9 CRC64;
SQ
  Query Match
                        60.0%; Score 3; DB 1; Length 12;
  Best Local Similarity 100.0%; Pred. No. 2.1e+02;
  Matches 3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                      0:
Qу
          2 SRL 4
             111
          2 SRL 4
Db
RESULT 2
UVSX BPT6
    UVSX BPT6
                 STANDARD; PRT; 16 AA.
AC
    006728:
DT
    01-JUN-1994 (Rel. 29, Created)
DT
    01-JUN-1994 (Rel. 29, Last sequence update)
DT
    28-FEB-2003 (Rel. 41, Last annotation update)
    Recombination and repair protein (Fragment).
DE
GN
    UVSX.
OS
    Bacteriophage T6.
OC
    Viruses; dsDNA viruses, no RNA stage; Caudovirales; Myoviridae;
OC
    T4-like viruses.
OX
    NCBI_TaxID=10666;
RN
    [1]
    SEQUENCE FROM N.A.
RP
RX
    MEDLINE=93219141; PubMed=8464751;
RA
    Winkler M., Rueger W.;
    "Cloning and sequencing of the genes of
RT
    beta-glucosyl-HMC-alpha-glucosyl-transferases of bacteriophages T2
RT
RT
    and T6.";
    Nucleic Acids Res. 21:1500-1500(1993).
RL
CC
    -!- FUNCTION: IMPORTANT IN GENETIC RECOMBINATION, DNA REPAIR, AND
CC
        REPLICATION. POSSESSES PAIRING AND STRAND-TRANSFER ACTIVITY.
CC
        INTERACTS WITH DDA AND GENE 32 PROTEINS.
CC
    -!- SIMILARITY: Belongs to the recA family.
CC
    -----
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     -----
CC
DR
     EMBL; X68725; CAA48668.1; -.
DR
     PIR; S35627; S35627.
KW
     DNA damage; DNA replication; DNA recombination; DNA repair;
KW
    ATP-binding.
FT
    NON TER 16
                      16
     SEQUENCE 16 AA; 1721 MW; 48164C95D76F3CB4 CRC64;
SO
  Query Match
                       60.0%; Score 3; DB 1; Length 16;
  Best Local Similarity 100.0%; Pred. No. 2.7e+02;
  Matches
          3; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
          2 SRL 4
Qу
             8 SRL 10
RESULT 3
UVSX BPT2
ID UVSX BPT2
                 STANDARD; PRT; 22 AA.
AC
    006727;
    01-JUN-1994 (Rel. 29, Created)
DT
DT
    01-JUN-1994 (Rel. 29, Last sequence update)
DT
    28-FEB-2003 (Rel. 41, Last annotation update)
DE
    Recombination and repair protein (Fragment).
GN
    UVSX.
OS
    Bacteriophage T2.
    Viruses; dsDNA viruses, no RNA stage; Caudovirales; Myoviridae;
OC
OC
    T4-like viruses.
OX
    NCBI TaxID=10664;
RN
    [1]
RΡ
    SEQUENCE FROM N.A.
RX
    MEDLINE=93219141; PubMed=8464751;
    Winkler M., Rueger W.;
    "Cloning and sequencing of the genes of
    beta-glucosyl-HMC-alpha-glucosyl-transferases of bacteriophages T2
RT
RT
    and T6.";
RL
    Nucleic Acids Res. 21:1500-1500(1993).
CC
    -!- FUNCTION: IMPORTANT IN GENETIC RECOMBINATION, DNA REPAIR, AND
CC
        REPLICATION. POSSESSES PAIRING AND STRAND-TRANSFER ACTIVITY.
CC
        INTERACTS WITH DDA AND GENE 32 PROTEINS.
CC
    -!- SIMILARITY: Belongs to the recA family.
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    ______
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```
DR
     EMBL; X68724; CAA48665.1; -.
     PIR; S35624; S35624.
DR
KW
     DNA damage; DNA replication; DNA recombination; DNA repair;
KW
     ATP-binding.
FT
     NON TER
                  22
                         22
SQ
     SEQUENCE 22 AA; 2395 MW; 00AFC6821020D816 CRC64;
  Query Match
                          60.0%; Score 3; DB 1; Length 22;
  Best Local Similarity 100.0%; Pred. No. 3.6e+02;
            3; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
                                                                            0;
            2 SRL 4
Qу
              Db
            8 SRL 10
RESULT 4
CARP MYTED
ΙD
     CARP MYTED
                    STANDARD;
                                  PRT; 7 AA.
AC
     P10420;
DT
     01-MAR-1989 (Rel. 10, Created)
DT
     01-MAR-1989 (Rel. 10, Last sequence update)
DT
     01-MAR-1989 (Rel. 10, Last annotation update)
DE
     Catch-relaxing peptide (CARP).
OS
     Mytilus edulis (Blue mussel).
OC
     Eukaryota; Metazoa; Mollusca; Bivalvia; Pteriomorphia; Mytiloida;
OC
     Mytiloidea; Mytilidae; Mytilus.
OX
     NCBI TaxID=6550;
RN
     [1]
RP
     SEQUENCE.
     MEDLINE=88052022; PubMed=3676797;
RX
RA
     Hirata T., Kubota I., Takabatake I., Kawahara A., Shimamoto N.,
RA
     Muneoka Y.;
     "Catch-relaxing peptide isolated from Mytilus pedal ganglia.";
RT
RL
     Brain Res. 422:374-376(1987).
     -!- FUNCTION: THIS PEPTIDE EXHIBITS BOTH POTENTIATING (CONTRACTION)
CC
CC
         AND INHIBITORY (RELAXATION) EFFECTS ON THE ANTERIOR BYSSUS
CC
         RETRACTOR MUSCLE.
DR
     PIR; A29342; ECMUCR.
KW
     Hormone; Amidation.
FT
     MOD RES
              7
                         7
                                AMIDATION.
     SEQUENCE 7 AA; 831 MW; 6734072687669DB0 CRC64;
SO
  Query Match
                         40.0%; Score 2; DB 1; Length 7;
  Best Local Similarity 100.0%; Pred. No. 1.3e+05;
  Matches
          2; Conservative 0; Mismatches 0; Indels 0; Gaps
           3 RL 4
Qу
             Db
           6 RL 7
RESULT 5
CHOX ALCSP
ID
   CHOX ALCSP
                   STANDARD;
                                  PRT;
                                       7 AA.
AC
    P16101;
DT
    01-APR-1990 (Rel. 14, Created)
```

```
DT
     01-APR-1990 (Rel. 14, Last sequence update)
DT
     01-APR-1990 (Rel. 14, Last annotation update)
DE
     Choline oxidase (EC 1.1.3.17) (Fragment).
OS
     Alcaligenes sp.
OC
     Bacteria; Proteobacteria; Betaproteobacteria; Burkholderiales;
OC
     Alcaligenaceae; Alcaligenes.
OX
     NCBI TaxID=512;
RN
     [1]
RΡ
     SEQUENCE.
RX
     MEDLINE=81006769; PubMed=6997283;
     Ohta-Fukuyama M., Miyake Y., Emi S., Yamano T.;
RA
RT
     "Identification and properties of the prosthetic group of choline
RT
     oxidase from Alcaligenes sp. ";
     J. Biochem. 88:197-203(1980).
RL
     -!- CATALYTIC ACTIVITY: Choline + O(2) = betaine aldehyde + H(2)O(2).
CC
DR
     PIR; A15398; A15398.
KW
     Oxidoreductase.
FT
     NON TER
                          7
SO
     SEQUENCE
                7 AA; 839 MW; 7415B1E457644AC0 CRC64;
  Query Match
                          40.0%; Score 2; DB 1; Length 7;
  Best Local Similarity
                          100.0%; Pred. No. 1.3e+05;
            2; Conservative 0; Mismatches 0; Indels
  Matches
                                                                  0; Gaps
                                                                              0;
Qу
            2 SR 3
              11
Db
            6 SR 7
RESULT 6
ALL3 CYDPO
     ALL3 CYDPO
ΙD
                    STANDARD;
                                   PRT:
                                           8 AA.
AC
     P82154;
DT
     30-MAY-2000 (Rel. 39, Created)
     30-MAY-2000 (Rel. 39, Last sequence update)
DT
DT
     30-MAY-2000 (Rel. 39, Last annotation update)
DE
     Cydiastatin 3.
OS
     Cydia pomonella (Codling moth).
OC
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
     Neoptera; Endopterygota; Lepidoptera; Glossata; Ditrysia;
OC
     Tortricoidea; Tortricidae; Olethreutinae; Cydia.
OC.
     NCBI_TaxID=82600;
OX
RN
     [1]
RP
     SEQUENCE.
RC
     TISSUE=Larva;
RX
     MEDLINE=98054539; PubMed=9392829;
RA
     Duve H., Johnsen A.H., Maestro J.-L., Scott A.G., Winstanley D.,
RA
     Davey M., East P.D., Thorpe A.;
RT
     "Lepidopteran peptides of the allatostatin superfamily.";
RL
     Peptides 18:1301-1309(1997).
CC
     -!- SIMILARITY: BELONGS TO THE ALLATOSTATIN FAMILY.
    Neuropeptide; Amidation.
KW
FT
    MOD RES
                   8
                                  AMIDATION.
SO
    SEOUENCE
                8 AA; 926 MW; C82879D5AB477415 CRC64;
 Query Match
                          40.0%; Score 2; DB 1; Length 8;
 Best Local Similarity 100.0%; Pred. No. 1.3e+05;
```

```
Matches 2; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                               0;
            2 SR 3
Qу
               Ш
Db
            1 SR 2
RESULT 7
FAR4 MACRS
     FAR4 MACRS
                    STANDARD;
                                    PRT;
                                             8 AA.
AC
     P83277;
DT
     28-FEB-2003 (Rel. 41, Created)
\mathsf{DT}
     28-FEB-2003 (Rel. 41, Last sequence update)
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
DE
     FMRFamide-like neuropeptide FLP4 (APALRLRF-amide).
OS
     Macrobrachium rosenbergii (Giant fresh water prawn).
OC
     Eukaryota; Metazoa; Arthropoda; Crustacea; Malacostraca;
OC
     Eumalacostraca; Eucarida; Decapoda; Pleocyemata; Caridea;
OC
     Palaemonoidea; Palaemonidae; Macrobrachium.
OX
     NCBI TaxID=79674;
RN
     [1]
RΡ
     SEQUENCE, AND MASS SPECTROMETRY.
RC
     TISSUE=Eyestalk;
     Sithigorngul P., Saraithongkum W., Jaideechoey S., Longyant S.,
RA
RA
     Sithigorngul W.;
     "Novel FMRFamide-like neuropeptides from the eyestalk of the giant
RТ
     freshwater prawn Macrobrachium rosenbergii.";
RT
     Comp. Biochem. Physiol. 120B:587-595(1998).
RL
CC
     -!- MASS SPECTROMETRY: MW=943; METHOD=MALDI.
CC
     -!- SIMILARITY: BELONGS TO THE FARP (FMRFAMIDE RELATED PEPTIDE)
CC
DR
     GO; GO:0007218; P:neuropeptide signaling pathway; TAS.
KW
     Neuropeptide; Amidation.
FT
     MOD RES
                                  AMIDATION.
SQ
     SEQUENCE
              8 AA; 943 MW; 9CD40734072DC76D CRC64;
  Query Match
                          40.0%; Score 2; DB 1; Length 8;
  Best Local Similarity 100.0%; Pred. No. 1.3e+05;
  Matches
            2; Conservative 0; Mismatches
                                                  0; Indels
                                                                  0; Gaps
                                                                              0;
Qу
            3 RL 4
Dh
            5 RL 6
RESULT 8
LMT2 LOCMI
     LMT2 LOCMI
                    STANDARD;
                                   PRT;
                                            8 AA.
AC
     P22396;
DT
     01-AUG-1991 (Rel. 19, Created)
DT
     01-AUG-1991 (Rel. 19, Last sequence update)
DT
     01-AUG-1991 (Rel. 19, Last annotation update)
DE
     Locustamyotropin 2 (LOM-MT-2).
OS
     Locusta migratoria (Migratory locust).
OC
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
OC
    Neoptera; Orthopteroidea; Orthoptera; Caelifera; Acridomorpha;
OC
    Acridoidea; Acrididae; Oedipodinae; Locusta.
```

```
OX
     NCBI TaxID=7004;
RN
     [1]
RΡ
     SEQUENCE.
RC
     TISSUE=Corpora cardiaca;
RA
     Schoofs L., Holman G.M., Hayes T.K., Nachman R.J., de Loof A.;
RT
     "Isolation, identification and synthesis of locustamyotropin II, an
RT
     additional neuropeptide of Locusta migratoria. Member of the
RT
     cephalomyotropic peptide family.";
RL
     Insect Biochem. 20:479-484(1990).
CC
     -!- FUNCTION: MEDIATES VISCERAL MUSCLE CONTRACTILE ACTIVITY
CC
         (MYOTROPIC ACTIVITY).
CC
     -!- SIMILARITY: BELONGS TO THE PYROKININ FAMILY.
DR
     InterPro; IPR001484; Pyrokinin.
DR
     PROSITE; PS00539; PYROKININ; 1.
KW
     Neuropeptide; Amidation; Pyrokinin.
FT
                          8
                                  AMIDATION.
SQ
     SEQUENCE
                8 AA; 934 MW; 26341771A9CAA87B CRC64;
  Query Match
                          40.0%; Score 2; DB 1; Length 8;
  Best Local Similarity
                          100.0%; Pred. No. 1.3e+05;
            2; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
                                                                              0;
            3 RL 4
Qу
Db
            7 RL 8
RESULT 9
LPK LEUMA
ID
     LPK LEUMA
                    STANDARD;
                                   PRT;
                                             8 AA.
AC
     P13049;
DT
     01-JAN-1990 (Rel. 13, Created)
DT
     01-FEB-1994 (Rel. 28, Last sequence update)
     28-FEB-2003 (Rel. 41, Last annotation update)
DT
     Leukopyrokinin (LPK) (LEM-PK).
DΕ
OS
     Leucophaea maderae (Madeira cockroach).
OC
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
OC
     Neoptera; Orthopteroidea; Dictyoptera; Blattaria; Blaberoidea;
OC
     Blaberidae; Leucophaea.
OX
     NCBI TaxID=6988;
RN
     [1]
RP
     SEQUENCE.
RX
     MEDLINE=86269041; PubMed=3015140;
RA
     Nachman R.J., Holman G.M., Cook B.J.;
RT
     "Active fragments and analogs of the insect neuropeptide
RT
     leucopyrokinin: structure-function studies.";
RL
     Biochem. Biophys. Res. Commun. 137:936-942(1986).
RN
     [2]
     SEQUENCE, AND SYNTHESIS.
RΡ
RC
     TISSUE=Head;
RX
     MEDLINE=87052651; PubMed=2877794;
RA
     Holman G.M., Cook B.J., Nachman R.J.;
RT
     "Primary structure and synthesis of a blocked myotropic
RT
     neuropeptide isolated from the cockroach, Leucophaea maderae.";
RL
     Comp. Biochem. Physiol. 85C:219-224(1986).
CC
     -!- FUNCTION: MEDIATES VISCERAL MUSCLE CONTRACTILE ACTIVITY
CC
         (MYOTROPIC ACTIVITY).
```

```
CC
     -!- MISCELLANEOUS: AN ANALOG WITHOUT THE N-TERMINAL PCA RESIDUE WAS
CC
         SYNTHESIZED AND FOUND TO EXHIBIT GREATER ACTIVITY (144%) THAN THE
CC
         PARENT NEUROPEPTIDE. THE PORTION OF THE SEQUENCE OF LPK MOST
CC
         CRITICAL FOR THE MYOTROPIC PROPERTIES IS LIMITED TO THE
CC
         PENTAPEPTIDE FRAGMENT FTPRL.
CC
     -!- SIMILARITY: BELONGS TO THE PYROKININ FAMILY.
DR
     PIR; A23967; A23967.
DR
     InterPro; IPR001484; Pyrokinin.
DR
     PROSITE; PS00539; PYROKININ; 1.
KW
     Neuropeptide; Amidation; Pyrokinin; Pyrrolidone carboxylic acid.
    MOD_RES 1 1 PYRROLIDONE CARBOXYLIC ACID.
FT
FT
    MOD RES
                 8
                       8
                              AMIDATION.
     SEQUENCE 8 AA; 949 MW; 92341771A9D5A1B6 CRC64;
SO
  Query Match
                        40.0%; Score 2; DB 1; Length 8;
  Best Local Similarity 100.0%; Pred. No. 1.3e+05;
           2; Conservative 0; Mismatches 0; Indels 0; Gaps
  Matches
                                                                      0;
Qу
          3 RL 4
            Db
          7 RL 8
RESULT 10
LPMS STAEP
    LPMS STAEP
ID
                 STANDARD; PRT; 8 AA.
AC
    01-NOV-1991 (Rel. 20, Created)
DT
    01-NOV-1991 (Rel. 20, Last sequence update)
DT
\mathsf{DT}
    01-MAR-1992 (Rel. 21, Last annotation update)
DE
    Probable msrA leader peptide.
OS
    Staphylococcus epidermidis.
OG
    Plasmid pUL5050.
    Bacteria; Firmicutes; Bacillales; Staphylococcus.
OC
OX
    NCBI TaxID=1282;
RN
    [1]
RΡ
    SEQUENCE FROM N.A.
    STRAIN=968;
RC
RX
    MEDLINE=91041730; PubMed=2233255;
    Ross J.I., Eady E.A., Cove J.H., Cunliffe W.J., Baumberg S.,
RA
RA
    Wootton J.C.;
    "Inducible erythromycin resistance in staphylococci is encoded by a
RТ
RT
    member of the ATP-binding transport super-gene family.";
RL
    Mol. Microbiol. 4:1207-1214(1990).
    -!- FUNCTION: MAY REGULATE EXPRESSION OF THE ERYTHROMYCIN RESISTANCE
CC
CC
        PROTEIN.
CC
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    ______
DR
    EMBL; X52085; CAA36303.1; -.
DR
    PIR; S11157; LFSAME.
```

```
KW
    Leader peptide; Plasmid.
SQ
    SEQUENCE 8 AA; 937 MW; FA37340685BDC1A6 CRC64;
                          40.0%; Score 2; DB 1; Length 8;
 Query Match
 Best Local Similarity
                         100.0%; Pred. No. 1.3e+05;
            2; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
                                                                             0;
           3 RL 4
Qу
              11
            6 RL 7
Db
RESULT 11
PPK2 PERAM
    PPK2 PERAM
                                   PRT:
ΙD
                   STANDARD;
                                            8 AA.
AC
    P82692;
DT
    16-OCT-2001 (Rel. 40, Created)
DT
    16-OCT-2001 (Rel. 40, Last sequence update)
    16-OCT-2001 (Rel. 40, Last annotation update)
DT
DE
    Pyrokinin-2 (Pea-PK-2) (FXPRL-amide).
OS
    Periplaneta americana (American cockroach).
OC.
    Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
OC
    Neoptera; Orthopteroidea; Dictyoptera; Blattaria; Blattoidea;
OC
    Blattidae; Periplaneta.
OX
    NCBI TaxID=6978;
RN
     [1]
RP
    SEQUENCE, FUNCTION, AND MASS SPECTROMETRY.
RC
    TISSUE=Corpora cardiaca;
RX
    MEDLINE=97353923; PubMed=9210163;
RA
    Predel R., Kellner R., Kaufmann R., Penzlin H., Gaede G.;
RΤ
    "Isolation and structural elucidation of two pyrokinins from the
RT
    retrocerebral complex of the American cockroach.";
    Peptides 18:473-478(1997).
RL
RN
    [2]
RΡ
    TISSUE SPECIFICITY.
RX
    MEDLINE=20189894; PubMed=10723010;
RA
    Predel R., Eckert M.;
RT
    "Tagma-specific distribution of FXPRLamides in the nervous system of
RT
    the American cockroach.";
RL
    J. Comp. Neurol. 419:352-363(2000).
CC
    -!- FUNCTION: MEDIATES VISCERAL MUSCLE CONTRACTILE ACTIVITY
CC
         (MYOTROPIC ACTIVITY).
    -!- TISSUE SPECIFICITY: CORPORA CARDIACA.
CC
CC
     -!- MASS SPECTROMETRY: MW=883; METHOD=MALDI.
CC
    -!- SIMILARITY: BELONGS TO THE PYROKININ FAMILY.
DR
    InterPro; IPR001484; Pyrokinin.
DR
    PROSITE; PS00539; PYROKININ; FALSE NEG.
KW
    Neuropeptide; Amidation; Pyrokinin.
FT
    MOD RES
                  8
                                 AMIDATION.
                        8
SQ
    SEQUENCE
              8 AA; 884 MW; C834176DD9D77775 CRC64;
                          40.0%; Score 2; DB 1; Length 8;
 Query Match
 Best Local Similarity 100.0%; Pred. No. 1.3e+05;
           2; Conservative 0; Mismatches 0; Indels 0; Gaps
Qу
           3 RL 4
```

```
Db
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RESULT 12
PPK3 PERAM
     PPK3 PERAM
ID
                    STANDARD;
                                   PRT;
                                             8 AA.
     P82618;
AC
DT
     16-OCT-2001 (Rel. 40, Created)
DT
     16-OCT-2001 (Rel. 40, Last sequence update)
DT
     16-OCT-2001 (Rel. 40, Last annotation update)
DE
     Pyrokinin-3 (Pea-PK-3) (FXPRL-amide).
     Periplaneta americana (American cockroach).
OS
OC
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
     Neoptera; Orthopteroidea; Dictyoptera; Blattaria; Blattoidea;
OC
OC.
     Blattidae; Periplaneta.
     NCBI TaxID=6978;
OX
RN
     [1]
     SEQUENCE, FUNCTION, AND MASS SPECTROMETRY.
RΡ
RC
     TISSUE=Retrocerebral complex;
RX
     MEDLINE=99212469; PubMed=10196736;
     Predel R., Kellner R., Nachman R.J., Holman G.M., Rapus J., Gaede G.;
RA
RT
     "Differential distribution of pyrokinin-isoforms in cerebral and
RT
     abdominal neurohemal organs of the American cockroach.";
RL
     Insect Biochem. Mol. Biol. 29:139-144(1999).
RN
RР
     TISSUE SPECIFICITY.
RX
     MEDLINE=20189894; PubMed=10723010;
RA
     Predel R., Eckert M.;
RT
     "Tagma-specific distribution of FXPRLamides in the nervous system of
RT
     the American cockroach.";
RL
     J. Comp. Neurol. 419:352-363(2000).
CC
     -!- FUNCTION: MEDIATES VISCERAL MUSCLE CONTRACTILE ACTIVITY
CC
         (MYOTROPIC ACTIVITY).
CC
     -!- TISSUE SPECIFICITY: CORPORA CARDIACA.
     -!- MASS SPECTROMETRY: MW=996.5; METHOD=MALDI.
CC
CC
     -! - SIMILARITY: BELONGS TO THE PYROKININ FAMILY.
KW
     Neuropeptide; Amidation; Pyrokinin.
FT
     MOD RES
                   8
                          8
                                  AMIDATION.
SO
     SEOUENCE
                8 AA; 997 MW; 0B34177409D772C7 CRC64;
  Query Match
                          40.0%; Score 2; DB 1; Length 8;
  Best Local Similarity 100.0%; Pred. No. 1.3e+05;
  Matches
             2; Conservative
                               0; Mismatches
                                                 0; Indels
                                                                  0; Gaps
            3 RL 4
QУ
              11
Db
            7 RL 8
RESULT 13
FAR3 PENMO
     FAR3 PENMO
                    STANDARD;
                                    PRT;
ΙD
                                             9 AA.
AC
     P83318;
DT
     28-FEB-2003 (Rel. 41, Created)
DT
     28-FEB-2003 (Rel. 41, Last sequence update)
     28-FEB-2003 (Rel. 41, Last annotation update)
DT
     FMRFamide-like neuropeptide FLP3 (AQPSMRLRF-amide).
DE
```

```
OS
     Penaeus monodon (Penoeid shrimp).
OC
     Eukaryota; Metazoa; Arthropoda; Crustacea; Malacostraca;
OC
     Eumalacostraca; Eucarida; Decapoda; Dendrobranchiata; Penaeoidea;
OC
     Penaeidae; Penaeus.
OX
     NCBI TaxID=6687;
RN
     [1]
RΡ
     SEQUENCE, AND MASS SPECTROMETRY.
RC
     TISSUE=Eyestalk;
RX
     MEDLINE=21956277; PubMed=11959015;
     Sithigorngul P., Pupuem J., Krungkasem C., Longyant S.,
RA
RA
     Chaivisuthangkura P., Sithigorngul W., Petsom A.;
RT
     "Seven novel FMRFamide-like neuropeptide sequences from the eyestalk
RT
     of the giant tiger prawn Penaeus monodon.";
     Comp. Biochem. Physiol. 131B:325-337(2002).
RL
CC
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- MASS SPECTROMETRY: MW=1121.2; METHOD=MALDI.
CC
     -!- SIMILARITY: BELONGS TO THE FARP (FMRFAMIDE RELATED PEPTIDE)
CC
         FAMILY.
KW
    Neuropeptide; Amidation.
FT
     MOD RES
                          9
                                  AMIDATION.
SO
     SEQUENCE
                9 AA; 1105 MW; CCD107340685A776 CRC64;
 Query Match
                          40.0%; Score 2; DB 1; Length 9;
  Best Local Similarity
                          100.0%; Pred. No. 1.3e+05;
            2; Conservative 0; Mismatches
                                                 0; Indels
                                                                  0; Gaps
                                                                              0;
            3 RL 4
Qу
              Н
            6 RL 7
Db
RESULT 14
FAR4 PENMO
ΙD
     FAR4 PENMO
                    STANDARD;
                                   PRT;
                                            9 AA.
AC
     P83319;
DT
     28-FEB-2003 (Rel. 41, Created)
DT
     28-FEB-2003 (Rel. 41, Last sequence update)
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
DΕ
     FMRFamide-like neuropeptide FLP4 (SQPSMRLRF-amide).
0S
     Penaeus monodon (Penoeid shrimp).
OC
     Eukaryota; Metazoa; Arthropoda; Crustacea; Malacostraca;
OC.
     Eumalacostraca; Eucarida; Decapoda; Dendrobranchiata; Penaeoidea;
OC
     Penaeidae; Penaeus.
OX
     NCBI_TaxID=6687;
RN
     [1]
RP
     SEQUENCE, AND MASS SPECTROMETRY.
RC
     TISSUE=Eyestalk;
     MEDLINE=21956277; PubMed=11959015;
RX
RA
     Sithigorngul P., Pupuem J., Krungkasem C., Longyant S.,
     Chaivisuthangkura P., Sithigorngul W., Petsom A.;
RA
RT
     "Seven novel FMRFamide-like neuropeptide sequences from the eyestalk
     of the giant tiger prawn Penaeus monodon.";
RT
     Comp. Biochem. Physiol. 131B:325-337(2002).
RL
CC
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- MASS SPECTROMETRY: MW=1119.8; METHOD=MALDI.
     -!- SIMILARITY: BELONGS TO THE FARP (FMRFAMIDE RELATED PEPTIDE)
CC
CC
         FAMILY.
```

```
KW
     Neuropeptide; Amidation.
FT
    MOD RES 9 9
                                 AMIDATION.
     SEQUENCE 9 AA; 1121 MW; DA0B07340685A776 CRC64;
SQ
  Query Match
                         40.0%; Score 2; DB 1; Length 9;
  Best Local Similarity 100.0%; Pred. No. 1.3e+05;
  Matches
           2; Conservative 0; Mismatches 0; Indels
                                                             0; Gaps
Qy
           3 RL 4
           6 RL 7
Db
RESULT 15
FAR5 PENMO
     FAR5 PENMO
                   STANDARD:
                                  PRT;
ID
                                           9 AA.
AC
     P83320;
DT
     28-FEB-2003 (Rel. 41, Created)
DT
     28-FEB-2003 (Rel. 41, Last sequence update)
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
DE
     FMRFamide-like neuropeptide FLP5 (SMPSLRLRF-amide).
OS
     Penaeus monodon (Penoeid shrimp).
OC
     Eukaryota; Metazoa; Arthropoda; Crustacea; Malacostraca;
OC
     Eumalacostraca; Eucarida; Decapoda; Dendrobranchiata; Penaeoidea;
OC
     Penaeidae; Penaeus.
OX
     NCBI TaxID=6687;
RN
     [1]
RΡ
     SEQUENCE, AND MASS SPECTROMETRY.
RC
     TISSUE=Eyestalk;
RX
     MEDLINE=21956277; PubMed=11959015;
RA
     Sithigorngul P., Pupuem J., Krungkasem C., Longyant S.,
RA
     Chaivisuthangkura P., Sithigorngul W., Petsom A.;
RT
     "Seven novel FMRFamide-like neuropeptide sequences from the eyestalk
RT
     of the giant tiger prawn Penaeus monodon.";
     Comp. Biochem. Physiol. 131B:325-337(2002).
RL
CC
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- MASS SPECTROMETRY: MW=1121.1; METHOD=MALDI.
CC
     -!- SIMILARITY: BELONGS TO THE FARP (FMRFAMIDE RELATED PEPTIDE)
CC
        FAMILY.
KW
     Neuropeptide; Amidation.
FT
     MOD RES
               9
                       9
                                 AMIDATION.
SO
     SEQUENCE 9 AA; 1106 MW; B60B07340735A766 CRC64;
  Query Match
                         40.0%; Score 2; DB 1; Length 9;
  Best Local Similarity 100.0%; Pred. No. 1.3e+05;
           2; Conservative 0; Mismatches 0; Indels 0; Gaps
           3 RL 4
Qу
              11
Db
           6 RL 7
RESULT 16
LMT3 LOCMI
    LMT3 LOCMI
ID
                                  PRT;
                                          9 AA.
                   STANDARD;
AC
     P41489;
DT
     01-NOV-1995 (Rel. 32, Created)
```

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DT
     01-NOV-1995 (Rel. 32, Last sequence update)
TG
     01-NOV-1995 (Rel. 32, Last annotation update)
DE
     Locustamyotropin 3 (LOM-MT-3).
OS
     Locusta migratoria (Migratory locust).
OC
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
OC
     Neoptera; Orthopteroidea; Orthoptera; Caelifera; Acridomorpha;
OC
     Acridoidea; Acrididae; Oedipodinae; Locusta.
OX
     NCBI TaxID=7004;
RN
     [1]
RΡ
     SEQUENCE, AND SYNTHESIS.
RC
     TISSUE=Brain;
     Schoofs L., Holman G.M., Hayes T.K., Nachman R.J., Kochansky J.P.,
RA
RA
     de Loof A.;
RT
     "Isolation, identification and synthesis of locustamyotropin III and
RT
     IV, two additional neuropeptides of Locusta migratoria: members of the
RT
     locustamyotropin peptide family.";
RL
     Insect Biochem. Mol. Biol. 22:447-452(1992).
CC
     -!- FUNCTION: POTENT MEDIATOR OF VISCERAL MUSCLE CONTRACTILE ACTIVITY
CC
         (MYOTROPIC ACTIVITY).
CC
     -!- SIMILARITY: BELONGS TO THE PYROKININ FAMILY.
DR
     PIR; A61620; A61620.
DR
     InterPro; IPR001484; Pyrokinin.
DR
     PROSITE; PS00539; PYROKININ; 1.
KW
     Neuropeptide; Amidation; Pyrokinin.
FT
     MOD RES
                   9
                          9
                                  AMIDATION.
SQ
     SEQUENCE
                9 AA; 1140 MW; D5AE1772C9D776C6 CRC64;
  Query Match
                          40.0%; Score 2; DB 1; Length 9;
  Best Local Similarity
                          100.0%; Pred. No. 1.3e+05;
           2; Conservative 0; Mismatches
                                                 0; Indels
                                                                  0; Gaps
                                                                              0;
Qу
            3 RL 4
              Db
            8 RL 9
RESULT 17
PPK1 PERAM
     PPK1 PERAM
                    STANDARD:
                                   PRT;
                                            9 AA.
AC
     P82691;
DT
     16-OCT-2001 (Rel. 40, Created)
DT
     16-OCT-2001 (Rel. 40, Last sequence update)
DT
     16-OCT-2001 (Rel. 40, Last annotation update)
DE
     Pyrokinin-1 (Pea-PK-1) (FXPRL-amide).
OS
     Periplaneta americana (American cockroach).
OC
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pteryqota;
OC
     Neoptera; Orthopteroidea; Dictyoptera; Blattaria; Blattoidea;
OC
     Blattidae; Periplaneta.
     NCBI TaxID=6978;
OX
RN
     [1]
     SEQUENCE, FUNCTION, AND MASS SPECTROMETRY.
RΡ
RC
     TISSUE=Corpora cardiaca;
RX
     MEDLINE=97353923; PubMed=9210163;
RA
     Predel R., Kellner R., Kaufmann R., Penzlin H., Gaede G.;
     "Isolation and structural elucidation of two pyrokinins from the
RT
RT
     retrocerebral complex of the American cockroach.";
RL
     Peptides 18:473-478(1997).
```

```
RN
     [2]
RΡ
     TISSUE SPECIFICITY.
RX
    MEDLINE=20189894; PubMed=10723010;
     Predel R., Eckert M.;
RA
RT
     "Tagma-specific distribution of FXPRLamides in the nervous system of
RT
     the American cockroach.";
RL
     J. Comp. Neurol. 419:352-363(2000).
CC
     -!- FUNCTION: MEDIATES VISCERAL MUSCLE CONTRACTILE ACTIVITY
CC
         (MYOTROPIC ACTIVITY).
CC
     -!- TISSUE SPECIFICITY: CORPORA CARDIACA.
CC
     -!- MASS SPECTROMETRY: MW=1010.4; METHOD=MALDI.
CC
     -!- SIMILARITY: BELONGS TO THE PYROKININ FAMILY.
DR
     InterPro; IPR001484; Pyrokinin.
     PROSITE; PS00539; PYROKININ; FALSE NEG.
DR
KW
    Neuropeptide; Amidation; Pyrokinin.
FT
    MOD RES
                   9
                          9
                                  AMIDATION.
SO
     SEQUENCE
                9 AA; 1011 MW; 885C176059C87DC1 CRC64;
  Query Match
                          40.0%; Score 2; DB 1; Length 9;
  Best Local Similarity
                          100.0%; Pred. No. 1.3e+05;
            2; Conservative
                               0; Mismatches 0;
                                                       Indels
                                                                  0; Gaps
                                                                              0;
            3 RL 4
Qу
              Ш
Db
            8 RL 9
RESULT 18
AKHX LOCMI
ID
     AKHX LOCMI
                    STANDARD;
                                   PRT;
                                           10 AA.
AC
     P81626;
DT
     30-MAY-2000 (Rel. 39, Created)
DT
     30-MAY-2000 (Rel. 39, Last sequence update)
     15-SEP-2003 (Rel. 42, Last annotation update)
DT
ĎΕ
     Peptide hormone.
OS
    Locusta migratoria (Migratory locust).
OC
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
OC
    Neoptera; Orthopteroidea; Orthoptera; Caelifera; Acridomorpha;
OC
     Acridoidea; Acrididae; Oedipodinae; Locusta.
OX
    NCBI TaxID=7004;
RN
     [1]
RΡ
     SEQUENCE.
RC
     TISSUE=Corpora cardiaca;
RA
     Siegert K.J.;
RL
     Submitted (DEC-1998) to the SWISS-PROT data bank.
     -!- FUNCTION: PROBABLY INVOLVED IN THE REGULATION OF LOCUST
CC
CC
         INTERMEDIARY METABOLISM, BEHAVIOR AND/OR DEVELOPMENT.
CC
     -!- SIMILARITY: BELONGS TO THE AKH / HRTH / RPCH FAMILY.
     InterPro; IPR002047; AKH.
DR
DR
     PROSITE; PS00256; AKH; 1.
     Neuropeptide; Amidation; Pyrrolidone carboxylic acid.
KW
                                  PYRROLIDONE CARBOXYLIC ACID.
FT
     MOD RES
                   1
                          1
                  10
FT
     MOD RES
                         10
                                  AMIDATION.
SQ
     SEQUENCE
                10 AA; 1222 MW; 81BFF67AB415B9D1 CRC64;
  Ouery Match
                          40.0%; Score 2; DB 1; Length 10;
  Best Local Similarity
                          100.0%; Pred. No. 2.6e+03;
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Matches
           2; Conservative 0; Mismatches 0; Indels 0; Gaps
            2 SR 3
Qу
              Db
            5 SR 6
RESULT 19
FAR5 MACRS
ΙD
     FAR5 MACRS
                                           10 AA.
                    STANDARD;
                                   PRT;
AC
     P83278;
DT
     28-FEB-2003 (Rel. 41, Created)
DT
     28-FEB-2003 (Rel. 41, Last sequence update)
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
DE
     FMRFamide-like neuropeptide FLP5 (DRTPALRLRF-amide).
OS
     Macrobrachium rosenbergii (Giant fresh water prawn).
OC
     Eukaryota; Metazoa; Arthropoda; Crustacea; Malacostraca;
OC
     Eumalacostraca; Eucarida; Decapoda; Pleocyemata; Caridea;
OC
     Palaemonoidea; Palaemonidae; Macrobrachium.
OX
     NCBI_TaxID=79674;
RN
     [1]
RP
     SEQUENCE, AND MASS SPECTROMETRY.
RC
     TISSUE=Eyestalk;
RA
     Sithigorngul P., Saraithongkum W., Jaideechoey S., Longyant S.,
RA
     Sithigorngul W.;
RT
     "Novel FMRFamide-like neuropeptides from the eyestalk of the giant
RT
     freshwater prawn Macrobrachium rosenbergii.";
     Comp. Biochem. Physiol. 120B:587-595(1998).
RL
CC
     -!- MASS SPECTROMETRY: MW=1243.4; METHOD=MALDI.
CC
     -!- SIMILARITY: BELONGS TO THE FARP (FMRFAMIDE RELATED PEPTIDE)
CC
DR
     GO; GO:0007218; P:neuropeptide signaling pathway; TAS.
KW
    Neuropeptide; Amidation.
FT
     MOD RES
                 10
                        10
                                  AMIDATION.
SO
     SEQUENCE
               10 AA; 1244 MW; 9A1A5334072DC771 CRC64;
  Query Match
                          40.0%; Score 2; DB 1; Length 10;
  Best Local Similarity 100.0%; Pred. No. 2.6e+03;
           2; Conservative 0; Mismatches
                                                 0; Indels 0; Gaps
                                                                             0;
Qу
            3 RL 4
           7 RL 8
Db
RESULT 20
GS09 BACSU
ΙD
    GS09_BACSU
                    STANDARD;
                                   PRT;
                                           10 AA.
AC
    P80243;
DT
     01-FEB-1995 (Rel. 31, Created)
DT
     01-FEB-1995 (Rel. 31, Last sequence update)
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
DΕ
    General stress protein 9 (GSP9) (Fragment).
OS
     Bacillus subtilis.
     Bacteria; Firmicutes; Bacillales; Bacillaceae; Bacillus.
OC
OX
    NCBI TaxID=1423;
RN
     [1]
```

```
RР
     SEQUENCE.
     STRAIN=168 / IS58;
RC
RX
     MEDLINE=94282319; PubMed=8012595;
     Voelker U., Engelmann S., Maul B., Riethdorf S., Voelker A.,
RA
RA
     Schmid R., Mach H., Hecker M.;
RT
     "Analysis of the induction of general stress proteins of Bacillus
RT
     subtilis.";
     Microbiology 140:741-752(1994).
RL
CC
     -!- INDUCTION: BY HEAT SHOCK, SALT STRESS, OXIDATIVE STRESS, GLUCOSE
CC
         LIMITATION AND OXYGEN LIMITATION.
CC
     -!- CAUTION: Could not be found in the genome of B. subtilis 168.
KW
     Heat shock.
FT
     NON_TER
                  10
                         10
SO
     SEQUENCE 10 AA; 1168 MW; 99766442D5A2C05A CRC64;
  Ouery Match
                          40.0%; Score 2; DB 1; Length 10;
  Best Local Similarity
                          100.0%; Pred. No. 2.6e+03;
                                                  0; Indels
  Matches
            2; Conservative 0; Mismatches
                                                                  0; Gaps
Qу
            2 SR 3
              Dh
            1 SR 2
RESULT 21
LPK2 LOCMI
ΙD
     LPK2 LOCMI
                    STANDARD;
                                   PRT;
                                            10 AA.
AC
     P41488;
\mathsf{D}\mathbf{T}
     01-NOV-1995 (Rel. 32, Created)
\mathsf{D}\mathbf{T}
     01-NOV-1995 (Rel. 32, Last sequence update)
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
DE
     Locustapyrokinin 2 (LOM-PK-2) (FXPRL-amide).
OS
     Locusta migratoria (Migratory locust).
OC
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
OC
     Neoptera; Orthopteroidea; Orthoptera; Caelifera; Acridomorpha;
OC
     Acridoidea; Acrididae; Oedipodinae; Locusta.
OX
     NCBI TaxID=7004;
RN
     [1]
RP
     SEQUENCE.
RC
     TISSUE=Brain;
RX
     MEDLINE=94094539; PubMed=7903606;
RA
     Schoofs L., Holman G.M., Nachman R., Proost P., van Damme J.,
RA
     de Loof A.;
RT
     "Isolation, identification and synthesis of locustapyrokinin II from
RT
     Locusta migratoria, another member of the FXPRL-amide peptide
RT
     family.";
RL
     Comp. Biochem. Physiol. 106C:103-109(1993).
CC
     -!- FUNCTION: MEDIATES VISCERAL MUSCLE CONTRACTILE ACTIVITY (MYOTROPIC
CC
         ACTIVITY).
CC
     -!- SIMILARITY: BELONGS TO THE PYROKININ FAMILY.
DR
     InterPro; IPR001484; Pyrokinin.
DR
     PROSITE; PS00539; PYROKININ; 1.
KW
     Neuropeptide; Amidation; Pyrokinin; Pyrrolidone carboxylic acid.
FT
     MOD RES
                   1
                          1
                                  PYRROLIDONE CARBOXYLIC ACID.
FT
     MOD RES
                  10
                         10
                                  AMIDATION.
SQ
     SEQUENCE
               10 AA; 1145 MW; CFAF4271A9D1B772 CRC64;
```

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Query Match
                       40.0%; Score 2; DB 1; Length 10;
  Best Local Similarity 100.0%; Pred. No. 2.6e+03;
 Matches 2; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Qу
          3 RL 4
            11
Db
          9 RL 10
RESULT 22
MALE KLEPN
ID
    MALE KLEPN
               STANDARD; PRT; 10 AA.
AC
    005564;
DT
    01-OCT-1994 (Rel. 30, Created)
DT 01-OCT-1994 (Rel. 30, Last sequence update)
DT
    30-MAY-2000 (Rel. 39, Last annotation update)
DE
    Maltose-binding periplasmic protein (Maltodextrin-binding protein)
DE
    (MMBP) (Fragment).
GN
    MALE.
OS
    Klebsiella pneumoniae.
OC
    Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
OC
    Enterobacteriaceae; Klebsiella.
OX
    NCBI TaxID=573;
RN
    [1]
RP
    SEQUENCE FROM N.A.
RC
    STRAIN=1033-5P14 / KAY2026;
RX
    MEDLINE=93211295; PubMed=8459773;
RA
    Bachellier S., Perrin D., Hofnung M., Gilson E.;
RT
    "Bacterial interspersed mosaic elements (BIMEs) are present in the
RT genome of Klebsiella.";
RL
   Mol. Microbiol. 7:537-544(1993).
CC
    -!- FUNCTION: MALE IS INVOLVED IN THE HIGH-AFFINITY MALTOSE MEMBRANE
CC
        TRANSPORT SYSTEM. INITIAL RECEPTOR FOR THE ACTIVE TRANSPORT OF AND
CC
        CHEMOTAXIS TOWARD MALTOOLIGOSACCHARIDES.
CC
    -!- SUBCELLULAR LOCATION: Periplasmic.
CC
    -!- SIMILARITY: BELONGS TO THE BACTERIAL EXTRACELLULAR SOLUTE-BINDING
CC
       PROTEIN FAMILY 1.
CC
CC
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    between the Swiss Institute of Bioinformatics and the EMBL outstation -
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    the European Bioinformatics Institute. There are no restrictions on its
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    modified and this statement is not removed. Usage by and for commercial
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    entities requires a license agreement (See http://www.isb-sib.ch/announce/
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    or send an email to license@isb-sib.ch).
CC
    DR
    EMBL; X68329; CAA48406.1; -.
DR
    InterPro; IPR006061; SBP dom1.
DR
    PROSITE; PS01037; SBP BACTERIAL 1; PARTIAL.
KW
    Transport; Sugar transport; Periplasmic.
FΤ
    NON TER
               1
                       1
SO
    SEQUENCE 10 AA; 1159 MW; 8FD8DC4415A6DDDA CRC64;
 Ouery Match
                        40.0%; Score 2; DB 1; Length 10;
 Best Local Similarity 100.0%; Pred. No. 2.6e+03;
 Matches 2; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
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2 SR 3
Qу
              Db
            6 SR 7
RESULT 23
RT02 BOVIN
ID
     RT02 BOVIN
                                    PRT;
                    STANDARD;
                                            10 AA.
AC
     P82923;
DT
     28-FEB-2003 (Rel. 41, Created)
DT
     28-FEB-2003 (Rel. 41, Last sequence update)
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
DE
     Mitochondrial 28S ribosomal protein S2 (MRP-S2) (Fragment).
GN
     MRPS2.
OS
     Bos taurus (Bovine).
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
OC
     Bovidae; Bovinae; Bos.
OX
     NCBI TaxID=9913;
RN
     [1]
RΡ
     SEQUENCE.
RC
     TISSUE=Liver:
RX
     MEDLINE=21276436; PubMed=11279123;
RA
     Koc E.C., Burkhart W., Blackburn K., Moseley A., Spremulli L.L.;
RT
     "The small subunit of the mammalian mitochondrial ribosome:
RT
     identification of the full complement of ribosomal proteins present.";
RL
     J. Biol. Chem. 276:19363-19374(2001).
CC
     -!- SUBUNIT: Component of the mitochondrial ribosome small subunit
CC
         (28S) which comprises a 12S rRNA and about 30 distinct proteins.
CC
     -!- SUBCELLULAR LOCATION: Mitochondrial.
CC
     -!- SIMILARITY: BELONGS TO THE S2P FAMILY OF RIBOSOMAL PROTEINS.
DR
     InterPro; IPR001865; Ribosomal S2.
DR
     Pfam; PF00318; Ribosomal S2; PARTIAL.
DR
     PROSITE; PS00962; RIBOSOMAL S2 1; PARTIAL.
KW
     Ribosomal protein; Mitochondrion.
FT
     NON TER
                   1
                          1
     NON TER
FT
                  10
                         10
     SEQUENCE
                10 AA; 1246 MW; 6A7A6679C04B476B CRC64;
SQ
  Query Match
                          40.0%; Score 2; DB 1; Length 10;
  Best Local Similarity 100.0%; Pred. No. 2.6e+03;
  Matches
             2; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
            2 SR 3
Qу
              \prod
Db
            9 SR 10
RESULT 24
TKU1 UREUN
     TKU1 UREUN
                    STANDARD;
                                   PRT;
                                           10 AA.
AC
     P40751;
DT
     01-FEB-1995 (Rel. 31, Created)
DT
     01-FEB-1995 (Rel. 31, Last sequence update)
DT
     15-SEP-2003 (Rel. 42, Last annotation update)
DE
    Urechistachykinin I.
OS
    Urechis unicinctus.
```

```
OC
     Eukaryota; Metazoa; Echiura; Xenopneusta; Urechidae; Urechis.
OX
     NCBI TaxID≈6432;
RN
     [1]
RΡ
     SEQUENCE, AND SYNTHESIS.
RC
     TISSUE=Ventral nerve cord;
RX
     MEDLINE=93236558; PubMed=8476410;
RA
     Ikeda T., Minakata H., Nomoto K., Kubota I., Muneoka Y.;
     "Two novel tachykinin-related neuropeptides in the echiuroid worm,
RT
RT
     Urechis unicinctus.";
RL
     Biochem. Biophys. Res. Commun. 192:1-6(1993).
CC
     -!- FUNCTION: CONTRACTILE ACTION ON THE INNER CIRCULAR BODY-WALL
CC
         MUSCLE OF THE ANIMAL.
CC
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- SIMILARITY: SOME SIMILARITY TO TACHYKININS.
KW
     Tachykinin; Neuropeptide; Amidation.
FT
     MOD RES
                  10
                         10
                                  AMIDATION.
SO
     SEQUENCE 10 AA; 1177 MW; C6D1C462C9D6C5A6 CRC64;
  Query Match
                          40.0%; Score 2; DB 1; Length 10;
  Best Local Similarity
                          100.0%; Pred. No. 2.6e+03;
            2; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                              0;
            2 SR 3
Qу
Db
            9 SR 10
RESULT 25
CORZ PERAM
     CORZ PERAM
ID
                    STANDARD;
                                   PRT;
                                           11 AA.
AC
     P11496;
DT
     01-OCT-1989 (Rel. 12, Created)
DT
     01-FEB-1994 (Rel. 28, Last sequence update)
     28-FEB-2003 (Rel. 41, Last annotation update)
DT
DE
     Corazonin.
OS
     Periplaneta americana (American cockroach).
OC
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
     Neoptera; Orthopteroidea; Dictyoptera; Blattaria; Blattoidea;
OC
OC
     Blattidae; Periplaneta.
OX
     NCBI TaxID=6978;
RN
     [1]
RP
     SEQUENCE.
RC
     TISSUE=Corpora cardiaca;
     MEDLINE=89325572; PubMed=2753132;
RX
RA
     Veenstra J.A.;
RT
     "Isolation and structure of corazonin, a cardioactive peptide from
RT
     the American cockroach.";
RL
     FEBS Lett. 250:231-234(1989).
CC
     -!- FUNCTION: CARDIOACTIVE PEPTIDE. CORAZONIN IS PROBABLY INVOLVED
CC
         IN THE PHYSIOLOGICAL REGULATION OF THE HEART BEAT.
DR
     PIR; S05002; S05002.
KW
     Neuropeptide; Amidation; Pyrrolidone carboxylic acid.
FT
     MOD RES
                   1
                         1
                                PYRROLIDONE CARBOXYLIC ACID.
FT
     MOD RES
                  11
                         1.1
                                  AMIDATION.
     SEQUENCE 11 AA; 1387 MW; C7CFF32D6415AB46 CRC64;
SQ
  Query Match
                          40.0%; Score 2; DB 1; Length 11;
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Best Local Similarity 100.0%; Pred. No. 2.8e+03;
             2; Conservative 0; Mismatches 0; Indels 0; Gaps
  Matches
                                                                              0;
            2 SR 3
Qу
            6 SR 7
Db
RESULT 26
FAR6 PENMO
     FAR6 PENMO
ID
                    STANDARD:
                                   PRT;
                                           11 AA.
AC
     P83321;
DT
     28-FEB-2003 (Rel. 41, Created)
DT
     28-FEB-2003 (Rel. 41, Last sequence update)
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
DΕ
     FMRFamide-like neuropeptide FLP6 (DGRTPALRLRF-amide).
OS
     Penaeus monodon (Penoeid shrimp).
OC
     Eukaryota; Metazoa; Arthropoda; Crustacea; Malacostraca;
OC
     Eumalacostraca; Eucarida; Decapoda; Dendrobranchiata; Penaeoidea;
OC
     Penaeidae; Penaeus.
OX
     NCBI TaxID=6687;
RN
     [1]
RΡ
     SEQUENCE, AND MASS SPECTROMETRY.
RC
     TISSUE=Eyestalk;
     MEDLINE=21956277; PubMed=11959015;
RX
     Sithigorngul P., Pupuem J., Krungkasem C., Longyant S.,
RA
RA
     Chaivisuthangkura P., Sithigorngul W., Petsom A.;
RT
     "Seven novel FMRFamide-like neuropeptide sequences from the eyestalk
RT
     of the giant tiger prawn Penaeus monodon.";
     Comp. Biochem. Physiol. 131B:325-337(2002).
RL
CC
     -!- SUBCELLULAR LOCATION: Secreted.
     -!- MASS SPECTROMETRY: MW=1301.8; METHOD=MALDI.
CC
CC
     -!- SIMILARITY: BELONGS TO THE FARP (FMRFAMIDE RELATED PEPTIDE)
CC
         FAMILY.
KW
     Neuropeptide; Amidation.
FT
     MOD RES
                 11
                        11
                                  AMIDATION.
SQ
     SEQUENCE
                11 AA; 1301 MW; 9A19C860072DC771 CRC64;
                          40.0%; Score 2; DB 1; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 2.8e+03;
             2; Conservative
                               0; Mismatches
                                                 0; Indels
                                                                 0; Gaps
                                                                              0;
            3 RL 4
Qу
              11
Db
            8 RL 9
RESULT 27
PKC1 CARMO
     PKC1 CARMO
ID
                    STANDARD;
                                   PRT;
                                           11 AA.
AC
     P82684;
DT
     16-OCT-2001 (Rel. 40, Created)
DT
     16-OCT-2001 (Rel. 40, Last sequence update)
DT
     16-OCT-2001 (Rel. 40, Last annotation update)
DΕ
     Pyrokinin-1 (Cam-PK-1) (FXPRL-Amide).
OS
     Carausius morosus (Indian stick insect).
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
OC
```

```
OC
     Neoptera; Orthopteroidea; Phasmatodea; Euphasmida; Phasmatoidea;
OC
     Heteronemiidae; Carausius.
OX
     NCBI TaxID=7022;
RN
     [1]
RP
     SEQUENCE, FUNCTION, AND MASS SPECTROMETRY.
RC
     TISSUE=Corpora cardiaca;
RA
     Predel R., Kellner R., Gaede G.;
RT
     "Myotropic neuropeptides from the retrocerebral complex of the stick
RT
     insect, Carausius morosus (Phasmatodea: Lonchodidae).";
RL
     Eur. J. Entomol. 96:275-278(1999).
CC
     -!- FUNCTION: MEDIATES VISCERAL MUSCLE CONTRACTILE ACTIVITY
CC
         (MYOTROPIC ACTIVITY).
CC
     -!- MASS SPECTROMETRY: MW=1235; METHOD=MALDI.
CC
     -!- SIMILARITY: BELONGS TO THE PYROKININ FAMILY.
DR
     InterPro; IPR001484; Pyrokinin.
DR
     PROSITE; PS00539; PYROKININ; FALSE NEG.
KW
     Neuropeptide; Amidation; Pyrokinin.
FT
     MOD RES
                  11
                                  AMIDATION.
                         11
SO
     SEQUENCE
                11 AA; 1236 MW; 2BFA5225BB46C1A8 CRC64;
 Query Match
                          40.0%; Score 2; DB 1; Length 11;
 Best Local Similarity
                          100.0%; Pred. No. 2.8e+03;
 Matches
             2; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
Qу
            3 RL 4
Db
           10 RL 11
RESULT 28
LMT1 LOCMI
     LMT1 LOCMI
                    STANDARD;
                                   PRT;
                                           12 AA.
     P22395;
AC
DT
     01-AUG-1991 (Rel. 19, Created)
     01-AUG-1991 (Rel. 19, Last sequence update)
DT
     01-AUG-1991 (Rel. 19, Last annotation update)
DT
DE
     Locustamyotropin 1 (LOM-MT-1).
OS
     Locusta migratoria (Migratory locust).
OC
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
OC
     Neoptera; Orthopteroidea; Orthoptera; Caelifera; Acridomorpha;
OC.
     Acridoidea; Acrididae; Oedipodinae; Locusta.
     NCBI TaxID=7004;
OX
RN
     [1]
RΡ
     SEQUENCE.
RC
     TISSUE=Corpora cardiaca;
RX
     MEDLINE=90341077; PubMed=1974346;
RA
     Schoofs L., Holman G.M., Hayes T.K., Tips A., Nachman R.J.,
RA
     Vandesande F., de Loof A.;
RT
     "Isolation, identification and synthesis of locustamyotropin
RT
     (Lom-MT), a novel biologically active insect peptide.";
RL
     Peptides 11:427-433(1990).
CC
     -!- FUNCTION: MEDIATES VISCERAL MUSCLE CONTRACTILE ACTIVITY
CC
         (MYOTROPIC ACTIVITY).
CC
     -!- SIMILARITY: BELONGS TO THE PYROKININ FAMILY.
     PIR; A43975; A43975.
DR
DR
     InterPro; IPR001484; Pyrokinin.
     PROSITE; PS00539; PYROKININ; 1.
DR
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```
KW
     Neuropeptide; Amidation; Pyrokinin.
FT
    MOD RES
                12
                       12 AMIDATION.
SO
     SEOUENCE
              12 AA; 1213 MW; D766C92722D6DDDD CRC64;
  Query Match
                          40.0%; Score 2; DB 1; Length 12;
  Best Local Similarity 100.0%; Pred. No. 3e+03;
            2; Conservative 0; Mismatches
 Matches
                                                0; Indels
                                                               0; Gaps
                                                                             0;
Qу
           3 RL 4
              Н
          11 RL 12
Db
RESULT 29
PPK4 PERAM
     PPK4 PERAM
ΙD
                   STANDARD;
                                   PRT;
                                          12 AA.
AC
     P82619;
DT
     16-OCT-2001 (Rel. 40, Created)
DT
     16-OCT-2001 (Rel. 40, Last sequence update)
DT
     16-OCT-2001 (Rel. 40, Last annotation update)
DE
     Pyrokinin-4 (Pea-PK-4) (YXPRL-amide).
OS
     Periplaneta americana (American cockroach).
OC
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
OC
     Neoptera; Orthopteroidea; Dictyoptera; Blattaria; Blattoidea;
OC
     Blattidae; Periplaneta.
OX
     NCBI_TaxID=6978;
RN
     [1]
RP
     SEQUENCE, FUNCTION, AND MASS SPECTROMETRY.
RC
    TISSUE=Retrocerebral complex;
    MEDLINE=99212469; PubMed=10196736;
RX
RA
     Predel R., Kellner R., Nachman R.J., Holman G.M., Rapus J., Gaede G.;
RT
     "Differential distribution of pyrokinin-isoforms in cerebral and
RT
     abdominal neurohemal organs of the American cockroach.";
RL
     Insect Biochem. Mol. Biol. 29:139-144(1999).
RN
     [2]
RP
    TISSUE SPECIFICITY.
RX
    MEDLINE=20189894; PubMed=10723010;
RA
     Predel R., Eckert M.;
RT
     "Tagma-specific distribution of FXPRLamides in the nervous system of
RT
     the American cockroach.";
RL
     J. Comp. Neurol. 419:352-363(2000).
CC
     -!- FUNCTION: MEDIATES VISCERAL MUSCLE CONTRACTILE ACTIVITY
CC
         (MYOTROPIC ACTIVITY) .
CC
     -!- TISSUE SPECIFICITY: CORPORA CARDIACA.
CC
     -!- MASS SPECTROMETRY: MW=1147.9; METHOD=MALDI.
CC
     -!- SIMILARITY: BELONGS TO THE PYROKININ FAMILY.
KW
     Neuropeptide; Amidation; Pyrokinin.
FT
    MOD RES
                 12
                        12
                                 AMIDATION.
SQ
     SEQUENCE
               12 AA; 1449 MW; FA7A3049FF42CAA1 CRC64;
  Query Match
                         40.0%; Score 2; DB 1; Length 12;
                         100.0%; Pred. No. 3e+03;
  Best Local Similarity
 Matches
          2; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
Qу
           3 RL 4
Db
          11 RL 12
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RESULT 30
PPK4 PERFU
ID
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                    STANDARD:
                                    PRT:
                                            12 AA.
AC
     P82690;
     16-OCT-2001 (Rel. 40, Created)
DT
     16-OCT-2001 (Rel. 40, Last sequence update)
DT
DT
     16-OCT-2001 (Rel. 40, Last annotation update)
DE
     Pyrokinin-4 (PEF-PK-4) (YXPRL-amide).
OS
     Periplaneta fuliginosa (Smokybrown cockroach).
OC
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
OC
     Neoptera; Orthopteroidea; Dictyoptera; Blattaria; Blattoidea;
OC
     Blattidae; Periplaneta.
     NCBI TaxID=36977;
OX
RN
     [1]
RP
     SEQUENCE, FUNCTION, AND MASS SPECTROMETRY.
RC
     TISSUE=Corpora cardiaca;
RX
     MEDLINE=20189894; PubMed=10723010;
RA
     Predel R., Eckert M.;
RT
     "Tagma-specific distribution of FXPRLamides in the nervous system of
RT
     the American cockroach.";
RL
     J. Comp. Neurol. 419:352-363(2000).
     -!- FUNCTION: MEDIATES VISCERAL MUSCLE CONTRACTILE ACTIVITY
CC
CC
         (MYOTROPIC ACTIVITY).
     -!- MASS SPECTROMETRY: MW=1437.9; METHOD=MALDI.
CC
CC
     -!- SIMILARITY: BELONGS TO THE PYROKININ FAMILY.
DR
     InterPro; IPR001484; Pyrokinin.
DR
     PROSITE: PS00539; PYROKININ: FALSE NEG.
KW
     Neuropeptide; Amidation; Pyrokinin.
FT
     MOD RES
                                  AMIDATION.
                  12
                          12
                12 AA;
SQ
     SEQUENCE
                        1439 MW; F9B53049FF42CAA1 CRC64;
  Query Match
                          40.0%; Score 2; DB 1; Length 12;
  Best Local Similarity
                          100.0%; Pred. No. 3e+03;
  Matches
             2; Conservative 0; Mismatches
                                                    0; Indels
                                                                   0;
                                                                       Gaps
                                                                               0;
            3 RL 4
Qу
           11 RL 12
Db
RESULT 31
RR16 GINBI
     RR16 GINBI
ΙD
                    STANDARD;
                                    PRT;
                                            12 AA.
AC
     P36207;
DT
     01-JUN-1994 (Rel. 29, Created)
DT
     01-JUN-1994 (Rel. 29, Last sequence update)
     28-FEB-2003 (Rel. 41, Last annotation update)
DΤ
DE
     Chloroplast 30S ribosomal protein S16 (Fragment).
GN
     RPS16.
OS
     Ginkgo biloba (Ginkgo).
OG
     Chloroplast.
OC
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC.
     Spermatophyta; Ginkgophyta; Ginkgoales; Ginkgoaceae; Ginkgo.
OX
     NCBI TaxID=3311;
     [1]
RN
```

```
RΡ
    SEQUENCE FROM N.A.
    MEDLINE=95094313; PubMed=8001171;
RX
    Richard M., Tremblay C., Bellemare G.;
RA
    "Chloroplastic genomes of Ginkgo biloba and Chlamydomonas moewusii
RT
    contain a chlB gene encoding one subunit of a light-independent
RT
    protochlorophyllide reductase.";
RT
    Curr. Genet. 26:159-165(1994).
RL
CC
    -!- SIMILARITY: BELONGS TO THE S16P FAMILY OF RIBOSOMAL PROTEINS.
    ______
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    or send an email to license@isb-sib.ch).
CC
    ______
    EMBL: U01531: AAA66977.1: -.
DR
    HAMAP; MF 00385; -; 1.
DR
    InterPro; IPR000307; Ribosomal S16.
DR
DR
    PROSITE; PS00732; RIBOSOMAL S16; 1.
KW
    Ribosomal protein; Chloroplast.
FT
    NON TER 12
                      12
    SEQUENCE 12 AA; 1488 MW; 6700EDAF9D033734 CRC64;
SO
                        40.0%; Score 2; DB 1; Length 12;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 3e+03;
           2; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
          3 RL 4
Oy
            5 RL 6
Db
RESULT 32
LMT4 LOCMI
   LMT4 LOCMI
                 STANDARD; PRT; 13 AA.
AC
    P41490;
    01-NOV-1995 (Rel. 32, Created)
DT
    01-NOV-1995 (Rel. 32, Last sequence update)
DT
    01-NOV-1995 (Rel. 32, Last annotation update)
DT
    Locustamyotropin 4 (LOM-MT-4).
DE
    Locusta migratoria (Migratory locust).
OS
    Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
OC
    Neoptera; Orthopteroidea; Orthoptera; Caelifera; Acridomorpha;
OC
    Acridoidea; Acrididae; Oedipodinae; Locusta.
OC
OX
    NCBI TaxID=7004;
RN
    [1]
    SEQUENCE, AND SYNTHESIS.
RΡ
RC
    TISSUE=Brain;
    Schoofs L., Holman G.M., Hayes T.K., Nachman R.J., Kochansky J.P.,
RA
RA
    de Loof A.;
     "Isolation, identification and synthesis of locustamyotropin III and
RT
    IV, two additional neuropeptides of Locusta migratoria: members of the
RT
RT
    locustamyotropin peptide family.";
    Insect Biochem. Mol. Biol. 22:447-452(1992).
RL
    -!- FUNCTION: POTENT MEDIATOR OF VISCERAL MUSCLE CONTRACTILE ACTIVITY
CC
```

```
CC
         (MYOTROPIC ACTIVITY). LOM-MT IV SEEMS TO BE A MORE POTENT MUSCLE
CC
        STIMULATOR THAN LOM-MT I, II AND III.
CC
     -!- SIMILARITY: BELONGS TO THE PYROKININ FAMILY.
DR
     PIR; B61620; B61620.
DR
     InterPro; IPR001484; Pyrokinin.
DR
     PROSITE; PS00539; PYROKININ; 1.
KW
     Neuropeptide; Amidation; Pyrokinin.
FT
     MOD RES
                13
                       13
                             AMIDATION.
SO
     SEQUENCE 13 AA; 1553 MW; 20861943824D6698 CRC64;
  Query Match
                         40.0%; Score 2; DB 1; Length 13;
  Best Local Similarity 100.0%; Pred. No. 3.3e+03;
 Matches
          2; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                           0;
Qу
           3 RL 4
             11
           1 RL 2
Db
RESULT 33
NEUT CAVPO
    NEUT CAVPO
ΙD
                   STANDARD;
                                 PRT; 13 AA.
AC
     P32560;
DT
     01-OCT-1993 (Rel. 27, Created)
DT
     01-OCT-1993 (Rel. 27, Last sequence update)
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
DE
     Neurotensin (NT).
     NTS.
GN
OS
     Cavia porcellus (Guinea pig).
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Mammalia; Eutheria; Rodentia; Hystricognathi; Caviidae; Cavia.
OX
     NCBI TaxID=10141;
RN
    [1]
RP
     SEQUENCE.
     TISSUE=Small intestine;
RC
     MEDLINE=86248085; PubMed=3087775;
RX
RA
     Shaw C., Thim L., Conlon J.M.;
RT
     "[Ser7] neurotensin: isolation from guinea pig intestine.";
RI.
     FEBS Lett. 202:187-192(1986).
CC
     -!- FUNCTION: Smooth muscle-contracting peptide.
     -!- SUBCELLULAR LOCATION: Secreted.
CC
CC
     -! - SIMILARITY: BELONGS TO THE NEUROTENSIN FAMILY.
DR
     PIR; A53608; A53608.
KW
     Vasoactive; Pyrrolidone carboxylic acid.
FT
     MOD RES
               1 1 PYRROLIDONE CARBOXYLIC ACID.
     SEQUENCE 13 AA; 1680 MW; 4C8314644C4115B3 CRC64;
SO
 Query Match
                         40.0%; Score 2; DB 1; Length 13;
 Best Local Similarity
                         100.0%; Pred. No. 3.3e+03;
 Matches
           2; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                           0;
Qу
           2 SR 3
             Db
           7 SR 8
```

```
ALYT ALYOB
ΙD
     ALYT ALYOB
                    STANDARD;
                                   PRT;
                                           14 AA.
AC
     P08944;
DT
     01-NOV-1988 (Rel. 09, Created)
     01-FEB-1994 (Rel. 28, Last sequence update)
DT
DT
     15-SEP-2003 (Rel. 42, Last annotation update)
DE
    Alytesin.
OS
    Alytes obstetricans (Midwife toad).
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Amphibia; Batrachia; Anura; Archeobatrachia; Discoglossidae; Alytes.
OX
    NCBI TaxID=8443;
RN
     [1]
RP
     SEQUENCE.
RC
    TISSUE=Skin secretion;
RX
    MEDLINE=84131098; PubMed=6141890;
RA
     Erspamer V., Erspamer G.F., Mazzanti G., Endean R.;
RT
     "Active peptides in the skins of one hundred amphibian species from
RT
    Australia and Papua New Guinea.";
RL
     Comp. Biochem. Physiol. 77C:99-108(1984).
CC
     -!- SUBCELLULAR LOCATION: Secreted.
     -!- TISSUE SPECIFICITY: Skin.
CC
CC
     -!- SIMILARITY: BELONGS TO THE BOMBESIN/NEUROMEDIN B/RANATENSIN
CC
         FAMILY.
DR
     InterPro; IPR000874; Bombesin.
DR
     Pfam; PF02044; Bombesin; 1.
     PROSITE; PS00257; BOMBESIN; 1.
DR
KW
     Amphibian defense peptide; Bombesin family; Amidation;
KW
     Pyrrolidone carboxylic acid.
FT
    MOD RES
                   1
                                  PYRROLIDONE CARBOXYLIC ACID.
                         1
FT
    MOD RES
                  14
                         14
                                  AMIDATION.
SO
    SEQUENCE
                14 AA; 1554 MW; D3C4E4D3AF129666 CRC64;
  Query Match
                          40.0%; Score 2; DB 1; Length 14;
  Best Local Similarity
                          100.0%; Pred. No. 3.5e+03;
 Matches
            2; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                              0:
Qу
            3 RL 4
              Db
            3 RL 4
RESULT 35
KLPS SCARA
ID
     KLPS SCARA
                                   PRT;
                    STANDARD;
                                           14 AA.
     P58396;
AC
DT
     28-FEB-2003 (Rel. 41, Created)
DT
     28-FEB-2003 (Rel. 41, Last sequence update)
DΤ
     28-FEB-2003 (Rel. 41, Last annotation update)
DE
    Kinin-like peptide-S (Fragment).
OS
    Scaptocosa raptoria (Spider).
OC
    Eukaryota; Metazoa; Arthropoda; Chelicerata; Arachnida; Araneae;
OC.
    Araneomorphae; Entelegynae; Lycosoidea; Lycosidae; Scaptocosa.
OX
    NCBI TaxID=180440;
RN
    [1]
RР
    SEQUENCE.
RC
    TISSUE=Venom;
RX
    MEDLINE=98267639; PubMed=9604280;
```

```
RA
     Ferreira L.A.F., Lucas S.M., Alves E.W., Hermann V.V., Reichl A.P.,
RA
     Habermehl G., Zingali R.B.;
     "Isolation, characterization and biological properties of two
RT
RT
     kinin-like peptides (peptide-S and peptide-R) from Scaptocosa
RT
     raptoria venom.";
RL
     Toxicon 36:31-39(1998).
CC
     -!- FUNCTION: Has kinin-like biological properties. Causes contraction
CC
         on the of mammallian ileum; relaxes the duodenum and increases the
CC
         capillary permeability.
KW
     Vasodilator.
FT
     NON TER
                  14
                         14
SQ
     SEQUENCE
              14 AA; 1510 MW; E811E2E5D2EE27CA CRC64;
  Query Match
                          40.0%; Score 2; DB 1; Length 14;
  Best Local Similarity 100.0%; Pred. No. 3.5e+03;
            2; Conservative 0; Mismatches 0; Indels
  Matches
                                                                0; Gaps
                                                                             0;
            3 RL 4
Qу
              Db
            1 RL 2
RESULT 36
LPER BACLI
ID
     LPER BACLI
                    STANDARD;
                                   PRT;
AC
     Q04303;
DT
     01-FEB-1995 (Rel. 31, Created)
DT
     01-FEB-1995 (Rel. 31, Last sequence update)
     01-NOV-1995 (Rel. 32, Last annotation update)
DT
DE
     Erythromycin resistance leader peptide (23S rRNA methylase leader
DE
     peptide).
OS
     Bacillus licheniformis, and
OS
     Bacillus anthracis.
OC
     Bacteria; Firmicutes; Bacillales; Bacillaceae; Bacillus.
OX
     NCBI TaxID=1402, 1392;
RN
     [1]
RP
     SEQUENCE FROM N.A.
RC
     SPECIES=B.licheniformis;
     MEDLINE=84245158; PubMed=6429477;
RX
RA
     Gryczan T., Israeli-Reches M., del Bue M., Dubnau D.;
RТ
     "DNA sequence and regulation of ermD, a macrolide-lincosamide-
RT
     streptogramin B resistance element from Bacillus licheniformis.";
     Mol. Gen. Genet. 194:349-356(1984).
RL
RN
     [2]
RP
     SEQUENCE FROM N.A.
RC
     SPECIES=B.licheniformis; STRAIN=EMR-1;
RX
    MEDLINE=91310580; PubMed=1713206;
     Kwak J.-K., Choi E.-C., Weisblum B.;
RA
     "Transcriptional attenuation control of ermK, a
RТ
    macrolide-lincosamide-streptogramin B resistance determinant from
RT
RT
     Bacillus licheniformis.";
    J. Bacteriol. 173:4725-4735(1991).
RL
RN
RP
    SEQUENCE FROM N.A.
RC
    SPECIES=B.anthracis; STRAIN=590;
RX
    MEDLINE=93232776; PubMed=8473865;
    Kim H.-S., Choi E.-C., Kim B.-K.;
RA
```

```
RT
     "A macrolide-lincosamide-streptogramin B resistance determinant from
RT
    Bacillus anthracis 590: cloning and expression of ermJ.";
    J. Gen. Microbiol. 139:601-607(1993).
RL
CC
     -!- FUNCTION: THIS PEPTIDE IS INVOLVED IN THE CONTROL MECHANISM OF
CC
        THE SYNTHESIS OF THE MACROLIDE-LINCOSAMIDE-STREPTOGRAMIN B
CC
        RESISTANCE PROTEIN. IT ACTS AS A TRANSCRIPTIONAL ATTENUATOR.
CC
     CC
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CC
    between the Swiss Institute of Bioinformatics and the EMBL outstation -
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    the European Bioinformatics Institute. There are no restrictions on its
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    or send an email to license@isb-sib.ch).
     CC
DR
    EMBL; L08389; AAA22596.1; -.
DR
    EMBL; M29832; AAA22598.1; -.
DR
    PIR; A42473; A42473.
KW
    Antibiotic resistance; Leader peptide.
SQ
    SEQUENCE 14 AA; 1732 MW; 5D1138B59F32ED07 CRC64;
 Query Match
                        40.0%; Score 2; DB 1; Length 14;
 Best Local Similarity 100.0%; Pred. No. 3.5e+03;
           2; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Qу
           3 RL 4
            6 RL 7
RESULT 37
PPK6 PERAM
    PPK6 PERAM
ID
                 STANDARD;
                               PRT; 14 AA.
AC
    P82693;
DT
    16-OCT-2001 (Rel. 40, Created)
DT
    16-OCT-2001 (Rel. 40, Last sequence update)
    16-OCT-2001 (Rel. 40, Last annotation update)
DT
DE
    Pyrokinin-6 (Pea-PK-6) (FXPRL-amide).
OS
    Periplaneta americana (American cockroach).
    Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
OC
OC
    Neoptera; Orthopteroidea; Dictyoptera; Blattaria; Blattoidea;
OC
    Blattidae; Periplaneta.
    NCBI_TaxID=6978;
OX
RN
RΡ
    SEQUENCE, FUNCTION, TISSUE SPECIFICITY, AND MASS SPECTROMETRY.
RC
    TISSUE=Abdominal perisympathetic organs, and Corpora cardiaca;
RX
    MEDLINE=20189894; PubMed=10723010;
RA
    Predel R., Eckert M.;
RT
    "Tagma-specific distribution of FXPRLamides in the nervous system of
RT
    the American cockroach.";
RL
    J. Comp. Neurol. 419:352-363(2000).
    -!- FUNCTION: SHOWS A WEAKLY MYOACTIVE ACTION.
CC
CC
    -!- TISSUE SPECIFICITY: CORPORA ALATA AND TO A LESSER EXTENT IN
CC
       ABDOMINAL PERISYMPATHETIC ORGANS.
CC
    -!- MASS SPECTROMETRY: MW=1590.8; METHOD=MALDI.
    -!- SIMILARITY: BELONGS TO THE PYROKININ FAMILY.
CC
    InterPro; IPR001484; Pyrokinin.
```

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PROSITE; PS00539; PYROKININ; 1.
DR
KW
    Amidation; Pyrokinin.
FΤ
    MOD RES
                14
                       14
                                 AMIDATION.
SO
    SEOUENCE
               14 AA; 1592 MW; 3966CC3FF384A998 CRC64;
                         40.0%; Score 2; DB 1; Length 14;
 Ouery Match
 Best Local Similarity 100.0%; Pred. No. 3.5e+03;
          2; Conservative 0; Mismatches 0; Indels
                                                               0; Gaps
                                                                            0;
           3 RL 4
Qу
          13 RL 14
Db
RESULT 38
SAP2 ARBPU
     SAP2 ARBPU
ΙD
                   STANDARD;
                                  PRT;
                                          14 AA.
AC
     P11760;
DT
     01-OCT-1989 (Rel. 12, Created)
DT
     01-OCT-1989 (Rel. 12, Last sequence update)
     01-MAR-1992 (Rel. 21, Last annotation update)
DT
DΕ
    Resact (Sperm-activating peptide) (SAP-IIA).
    Arbacia punctulata (Punctuate sea urchin).
OS
OC
    Eukaryota; Metazoa; Echinodermata; Eleutherozoa; Echinozoa;
OC
     Echinoidea; Euechinoidea; Echinacea; Arbacoida; Arbaciidae; Arbacia.
OX
    NCBI TaxID=7641;
RN
     [1]
RΡ
     SEQUENCE.
RC
    TISSUE=Egg;
RX
    MEDLINE=85054981; PubMed=6150045;
RA
     Suzuki N., Shimomura H., Radany E.W., Ramarao C.S., Ward G.E.,
RA
     Bentley J.K., Garbers D.L.;
     "A peptide associated with eggs causes a mobility shift in a major
RT
RT
     plasma membrane protein of spermatozoa.";
RL
    J. Biol. Chem. 259:14874-14879(1984).
RN
     [2]
RΡ
     DISULFIDE BOND.
RX
    MEDLINE=92097763; PubMed=1756858;
RA
     Yoshimo K.-I., Takao T., Shimonishi Y., Suzuki N.;
RT
     "Determination of the amino acid sequence of an intramolecular
RT
     disulfide linkage-containing sperm-activating peptide by tandem mass
RT
     spectrometry.";
RL
    FEBS Lett. 294:179-182(1991).
CC
     -!- FUNCTION: CAUSE STIMULATION OF SPERM RESPIRATION AND MOTILITY
CC
        THROUGH INTRACELLULAR ALKALINIZATION, TRANSIENT ELEVATIONS OF
CC
        CAMP, CGMP AND CLACIUM LEVELS IN SPERM CELLS, AND TRANSIENT
CC
        ACTIVATION AND SUBSEQUENT INACTIVATION OF THE MEMBRANE FORM OF
CC
        GUANYLATE CYCLASE.
     -!- SIMILARITY: SMALL TO S. PURPURATUS SPERACT.
CC
KW
    Amidation.
                         8
FT
    DISULFID
                  1
FT
                14
                                AMIDATION.
    MOD RES
                       14
SO
     SEQUENCE 14 AA; 1246 MW; 39745AA33EBE41B8 CRC64;
  Query Match
                         40.0%; Score 2; DB 1; Length 14;
  Best Local Similarity 100.0%; Pred. No. 3.5e+03;
 Matches 2; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                            0;
```

```
Qу
            3 RL 4
Db
           13 RL 14
RESULT 39
CX3B CONOU
ΙD
     CX3B CONQU
                    STANDARD;
                                    PRT;
                                            15 AA.
AC
     P58842;
DT
     28-FEB-2003 (Rel. 41, Created)
DT
     28-FEB-2003 (Rel. 41, Last sequence update)
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
DE
     Conotoxin QcIIIB.
OS
     Conus quercinus (Oak cone).
OC
     Eukaryota; Metazoa; Mollusca; Gastropoda; Orthogastropoda;
OC
     Apogastropoda; Caenogastropoda; Sorbeoconcha; Hypsogastropoda;
OC
     Neogastropoda; Conoidea; Conidae; Conus.
OX
     NCBI TaxID=101313;
RN
     [1]
RΡ
     SEQUENCE.
RX
     MEDLINE=90327072; PubMed=2165278;
RA
     Abogadie F.C., Ramilo C.A., Corpuz G.P., Cruz L.J.;
RL
     Unpublished results, cited by:
RL
     Olivera B.M., Rivier J.E., Clark C., Ramilo C.A., Corpuz G.P.,
RL
     Abogadie F.C., Mena E.E., Woodward S.R., Hillyard D.R., Cruz L.J.;
RL
     Science 249:257-263(1990).
     -!- SUBCELLULAR LOCATION: Secreted.
CC
CC
     -!- TISSUE SPECIFICITY: Expressed by the venom duct.
CC
     -!- SIMILARITY: BELONGS TO THE M-SUPERFAMILY OF CONOTOXINS.
KW
     Toxin; Hydroxylation.
FT
     DISULFID
                   1
                          9
                                   PROBABLE.
FT
     DISULFID
                   2
                         12
                                   PROBABLE.
FT
     DISULFID
                   6
                         13
                                   PROBABLE.
FT
     MOD RES
                  11
                         11
                                  HYDROXYLATION.
SQ
                15 AA; 1724 MW; C9CEBA917BED832D CRC64;
     SEQUENCE
  Query Match
                          40.0%; Score 2; DB 1; Length 15;
  Best Local Similarity 100.0%; Pred. No. 3.7e+03;
            2; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
                                                                               0;
Qу
            2 SR 3
Db
            3 SR 4
RESULT 40
RS10 BACST
     RS10 BACST
ΙD
                    STANDARD;
                                    PRT;
                                            15 AA.
AC
     P59683;
DT
     15-SEP-2003 (Rel. 42, Created)
     15-SEP-2003 (Rel. 42, Last sequence update)
DT
DT
     15-SEP-2003 (Rel. 42, Last annotation update)
DE
     305 ribosomal protein S10 (BS13) (Fragment).
GN
     RPSJ.
     Bacillus stearothermophilus.
OS
     Bacteria; Firmicutes; Bacillales; Bacillaceae; Geobacillus.
OC.
```

```
OX
    NCBI TaxID=1422;
RN
    [1]
RΡ
    SEQUENCE.
RC
    STRAIN=10:
RX
    PubMed=4607606;
RA
    Yaquchi M., Matheson A.T., Visentin L.P.;
RT
    "Procaryotic ribosomal proteins: N-terminal sequence homologies and
RT
    structural correspondence of 30 S ribosomal proteins from Escherichia
RT
    coli and Bacillus stearothermophilus.";
RL
    FEBS Lett. 46:296-300(1974).
CC
    -!- FUNCTION: Involved in the binding of tRNA to the ribosomes (By
CC
        similarity).
CC
    -!- SIMILARITY: BELONGS TO THE S10P FAMILY OF RIBOSOMAL PROTEINS.
DR
    HAMAP; MF 00508; -; 1.
DR
    PROSITE; PS00361; RIBOSOMAL S10; PARTIAL.
KW
    Ribosomal protein.
FT
    INIT MET
                         0
                 0
FT
    NON TER
                 15
                        15
SQ
    SEQUENCE
               15 AA; 1897 MW; 746B2ACEAF9AC031 CRC64;
                         40.0%; Score 2; DB 1; Length 15;
 Query Match
 Best Local Similarity 100.0%; Pred. No. 3.7e+03;
           2; Conservative 0; Mismatches 0; Indels
 Matches
                                                                0; Gaps
                                                                            0;
           3 RL 4
Qу
             8 RL 9
RESULT 41
TA1 TREBR
    TA1 TREBR
                   STANDARD;
                                  PRT;
ΙD
                                          15 AA.
AC
    P34070;
DT
    01-FEB-1994 (Rel. 28, Created)
    01-FEB-1994 (Rel. 28, Last sequence update)
DT
    01-FEB-1994 (Rel. 28, Last annotation update)
DT
DE
    Tremerogen A-I.
OS
    Tremella brasiliensis (Jelly fungus).
OC
    Eukaryota; Fungi; Basidiomycota; Hymenomycetes; Heterobasidiomycetes;
OC
    Tremellomycetidae; Tremellales; Tremellaceae; Tremella.
OX
    NCBI TaxID=29896;
RN
    [1]
RΡ
    SEQUENCE.
RA
    Ishibashi Y., Sakagami Y., Isogai A., Suzuki A.;
RT
    "Structures of Tremerogens A-9291-I and A-9291-VIII: peptidyl sex
RT
    hormones of Tremella brasiliensis.";
RL
    Biochemistry 23:1399-1404(1984).
CC
    -!- FUNCTION: TREMEROGEN A-I IS PRODUCED BY THE A MATING-TYPE CELLS
        AND INDUCES FORMATION OF CONJUGATION TUBES IN A MATING-TYPE CELLS.
CC
KW
    Pheromone; Prenylation; Lipoprotein.
FT
                15
    LIPID
                        15
                                 FARNESYL.
SO
    SEQUENCE
               15 AA; 1339 MW; 3AABA4FC2D605333 CRC64;
                         40.0%; Score 2; DB 1; Length 15;
 Query Match
 Best Local Similarity 100.0%; Pred. No. 3.7e+03;
          2; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
                                                                            0;
```

```
Qу
            2 SR 3
            5 SR 6
Dh
RESULT 42
UC13 MAIZE
     UC13 MAIZE
                    STANDARD;
                                   PRT;
                                           15 AA.
AC
     P80619;
DT
     01-OCT-1996 (Rel. 34, Created)
DT
     01-OCT-1996 (Rel. 34, Last sequence update)
DT
     15-JUL-1999 (Rel. 38, Last annotation update)
DE
     Unknown protein from 2D-page of etiolated coleoptile (Spot 243)
DE
     (Fragment).
OS
     Zea mays (Maize).
OC
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
     Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
OC
     PACCAD clade; Panicoideae; Andropogoneae; Zea.
OX
     NCBI TaxID=4577;
RN
     [1]
     SEQUENCE.
RΡ
RC
     TISSUE=Coleoptile;
RA
     Touzet P., Riccardi F., Morin C., Damerval C., Huet J.-C.,
RA
     Pernollet J.-C., Zivy M., de Vienne D.;
RТ
     "The maize two dimensional gel protein database: towards an integrated
RT
     genome analysis program.";
RL
     Theor. Appl. Genet. 93:997-1005(1996).
     -!- MISCELLANEOUS: ON THE 2D-GEL THE DETERMINED PI OF THIS UNKNOWN
CC
CC
         PROTEIN IS: 6.8, ITS MW IS: 56.9 kDa.
CC
     -!- SIMILARITY: TO GLUCOSE-6-PHOSPHATE 1-DEHYDROGENASES.
DR
     Maize-2DPAGE; P80619; COLEOPTILE.
DR
     MaizeDB; 123946; -.
FT
     NON TER
                          1
                   1
     NON TER
FT
                  15
                         15
SQ
     SEQUENCE
                15 AA; 1739 MW; 02038EE7471AE038 CRC64;
  Query Match
                          40.0%; Score 2; DB 1; Length 15;
  Best Local Similarity
                          100.0%; Pred. No. 3.7e+03;
  Matches
           2; Conservative 0; Mismatches
                                                    0; Indels
                                                                  0; Gaps
                                                                              0;
QУ
            3 RL 4
Db
            9 RL 10
RESULT 43
UC25 MAIZE
     UC25 MAIZE
ID
                    STANDARD;
                                   PRT;
                                           15 AA.
AC
     P80631;
DT
     01-OCT-1996 (Rel. 34, Created)
DT
     01-OCT-1996 (Rel. 34, Last sequence update)
DT
     15-JUL-1999 (Rel. 38, Last annotation update)
DE
     Unknown protein from 2D-page of etiolated coleoptile (Spot 77)
DE
     (Fragment).
0S
     Zea mays (Maize).
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
     Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
OC.
```

```
OC
     PACCAD clade; Panicoideae; Andropogoneae; Zea.
OX
     NCBI TaxID=4577;
RN
     [1]
RΡ
     SEQUENCE.
RC
     TISSUE=Coleoptile;
RA
     Touzet P., Riccardi F., Morin C., Damerval C., Huet J.-C.,
RA
     Pernollet J.-C., Zivy M., de Vienne D.;
RT
     "The maize two dimensional gel protein database: towards an integrated
RT
     genome analysis program.";
RL
     Theor. Appl. Genet. 93:997-1005(1996).
CC
     -!- MISCELLANEOUS: ON THE 2D-GEL THE DETERMINED PI OF THIS UNKNOWN
CC
         PROTEIN IS: 4.9, ITS MW IS: 31.6 kDa.
DR
    Maize-2DPAGE; P80631; COLEOPTILE.
DR
    MaizeDB; 123957; -.
FT
    NON TER
                  1
                          1
FT
     NON TER
                  15
                         15
SQ
     SEQUENCE
                15 AA; 1580 MW; 83C54CF0CE1614D0 CRC64;
 Query Match
                          40.0%; Score 2; DB 1; Length 15;
  Best Local Similarity 100.0%; Pred. No. 3.7e+03;
            2; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
                                                                              0;
            2 SR 3
Qу
              Ш
Db
            6 SR 7
RESULT 44
URE1 MORMO
     URE1 MORMO
ΙD
                    STANDARD;
                                   PRT;
                                           15 AA.
AC
     P17337;
DT
     01-AUG-1990 (Rel. 15, Created)
     01-AUG-1990 (Rel. 15, Last sequence update)
     28-FEB-2003 (Rel. 41, Last annotation update)
рΤ
     Urease alpha subunit (EC 3.5.1.5) (Urea amidohydrolase) (Urease 63 kDa
DΕ
DΕ
     subunit) (Fragment).
GN
    UREC.
OS
    Morganella morganii (Proteus morganii).
OC
     Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
OC
     Enterobacteriaceae; Morganella.
OX
    NCBI TaxID=582;
RN
     [1]
RP
     SEQUENCE.
RX
    MEDLINE=90264298; PubMed=2345135;
RA
     Hu L.-T., Nicholson E.B., Jones B.D., Lynch M.J., Mobley H.L.T.;
RT
     "Morganella morganii urease: purification, characterization, and
RT
     isolation of gene sequences.";
     J. Bacteriol. 172:3073-3080(1990).
RL
CC
     -! - CATALYTIC ACTIVITY: Urea + H(2)O = CO(2) + 2 NH(3).
CC
     -!- COFACTOR: Binds 2 nickel ions per subunit (Potential).
     -!- SUBUNIT: (ALPHA, BETA, GAMMA)(3) (BY SIMILARITY).
CC
CC
     -! - SIMILARITY: BELONGS TO THE UREASE FAMILY.
DR
     PIR; A35389; A35389.
     InterPro; IPR005848; UreaseA.
DR
     PROSITE; PS00145; UREASE_2; PARTIAL.
DR
     PROSITE; PS01120; UREASE_1; PARTIAL.
DR
KW
    Hydrolase; Metal-binding; Nickel.
```

```
15
FT
    NON TER
    SEQUENCE
               15 AA; 1650 MW; 09E27AA54241687B CRC64;
SO
                         40.0%; Score 2; DB 1; Length 15;
 Query Match
 Best Local Similarity 100.0%; Pred. No. 3.7e+03;
           2; Conservative 0; Mismatches 0; Indels
                                                              0; Gaps
                                                                           0:
           2 SR 3
Qу
              | | |
Db
           4 SR 5
RESULT 45
AF2S MALPA
ΙD
    AF2S MALPA
                   STANDARD;
                                  PRT;
                                          16 AA.
    P83142;
AC
DΤ
    28-FEB-2003 (Rel. 41, Created)
    28-FEB-2003 (Rel. 41, Last sequence update)
DT
    28-FEB-2003 (Rel. 41, Last annotation update)
    Antifungal protein 2 small subunit (CW-2) (Fragment).
DE
OS
    Malva parviflora (Little mallow) (Cheeseweed).
OC
    Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
    Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae;
OC
    eurosids II; Malvales; Malvaceae; Malvoideae; Malva.
OX
    NCBI TaxID=145753;
RN
     [1]
RΡ
    SEQUENCE, AND FUNCTION.
RC
    TISSUE=Seed;
    MEDLINE=20568734; PubMed=11118343;
RX
RA
    Wang X., Bunkers G.J.;
RT
     "Potent heterologous antifungal proteins from cheeseweed (Malva
RT
    parviflora).";
RL
    Biochem. Biophys. Res. Commun. 279:669-673(2000).
CC
     -!- FUNCTION: Possesses antifungal activity against P.infestans but
CC
        not F.graminearum.
CC
     -!- SUBUNIT: Heterodimer of a large and a small subunit.
CC
     -!- MISCELLANEOUS: Antimicrobial activity is not affected by salt
        concentration.
CC
DR
    GO; GO:0003799; F:antifungal peptide activity; IDA.
KW
     Fungicide; Antibiotic.
FT
    NON TER
                16
                        16
     SEQUENCE
               16 AA; 2027 MW; 9998D9EB8FB7EE65 CRC64;
                         40.0%; Score 2; DB 1; Length 16;
  Best Local Similarity 100.0%; Pred. No. 3.9e+03;
           2; Conservative 0; Mismatches 0; Indels 0; Gaps
 Matches
                                                                           0;
           2 SR 3
Qу
             Db
           4 SR 5
RESULT 46
FOR1 MYRGU
ID
    FOR1 MYRGU
                   STANDARD;
                               PRT;
                                          16 AA.
AC
    P81438;
DT
    15-DEC-1998 (Rel. 37, Created)
```

```
DT
     15-DEC-1998 (Rel. 37, Last sequence update)
\mathsf{D}\mathsf{T}
     30-MAY-2000 (Rel. 39, Last annotation update)
DE
     Formaecin 1.
OS
     Myrmecia gulosa (Red bulldog ant).
OC
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
     Neoptera; Endopterygota; Hymenoptera; Apocrita; Aculeata; Formicidae;
OC
OC
     Myrmeciinae; Myrmecia.
OX
     NCBI TaxID=36170;
RN
RP
     SEQUENCE, AND CARBOHYDRATE-LINKAGE SITE THR-11.
RC
     TISSUE=Hemolymph;
RX
     MEDLINE=98165787; PubMed=9497332;
RA
     Mackintosh J.A., Veal D.A., Beattie A.J., Gooley A.A.;
RT
     "Isolation from an ant Myrmecia gulosa of two inducible
RT
     O-glycosylated proline-rich antibacterial peptides.";
RL
     J. Biol. Chem. 273:6139-6143(1998).
CC
     -!- FUNCTION: ANTIBACTERIAL PEPTIDE. HAS ACTIVITY AGAINST E.COLI
CC
         BUT NONE AGAINST OTHER GRAM-NEGATIVE BACTERIA AND GRAM-POSITIVE
CC
         BACTERIA.
CC
     -!- INDUCTION: By bacterial infection.
     -!- PTM: O-LINKED GLYCAN CONSISTS OF A GAL-GALNAC DISACCHARIDE, O-
CC
CC
         GLYCOSYLATION IS ESSENTIAL FOR FULL BIOLOGICAL ACTIVITY.
CC
     -!- SIMILARITY: TO DROSOPHILA DROSOCIN.
KW
     Antibiotic; Glycoprotein; Insect immunity; Hemolymph.
FT
     CARBOHYD
                 11
                         11
                                  O-LINKED (GALNAC. . .).
SO
     SEQUENCE
                16 AA; 1794 MW; 80CEA3AABBC2E0AE CRC64;
  Query Match
                          40.0%; Score 2; DB 1; Length 16;
  Best Local Similarity 100.0%; Pred. No. 3.9e+03;
            2; Conservative 0; Mismatches
                                                 0; Indels
                                                                  0; Gaps
                                                                              0;
            3 RL 4
Qу
Db
           15 RL 16
RESULT 47
FOR2 MYRGU
ID
     FOR2 MYRGU
                    STANDARD;
                                   PRT;
                                           16 AA.
AC
     P81437;
DT
     15-DEC-1998 (Rel. 37, Created)
DT
     15-DEC-1998 (Rel. 37, Last sequence update)
DT
     30-MAY-2000 (Rel. 39, Last annotation update)
DE
     Formaecin 2.
OS
     Myrmecia gulosa (Red bulldog ant).
OC
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
OC
     Neoptera; Endopterygota; Hymenoptera; Apocrita; Aculeata; Formicidae;
OC
     Myrmeciinae; Myrmecia.
OX
     NCBI TaxID=36170;
RN
     [1]
RP
     SEQUENCE, AND CARBOHYDRATE-LINKAGE SITE THR-11.
RC
     TISSUE=Hemolymph;
    MEDLINE=98165787; PubMed=9497332;
RX
     Mackintosh J.A., Veal D.A., Beattie A.J., Gooley A.A.;
RA
     "Isolation from an ant Myrmecia gulosa of two inducible
RT
RT
     O-glycosylated proline-rich antibacterial peptides.";
RL
    J. Biol. Chem. 273:6139-6143(1998).
```

```
CC
     -!- FUNCTION: ANTIBACTERIAL PEPTIDE. HAS ACTIVITY AGAINST E.COLI
CC
         BUT NONE AGAINST OTHER GRAM-NEGATIVE BACTERIA AND GRAM-POSITIVE
CC
         BACTERIA.
CC
     -!- INDUCTION: By bacterial infection.
CC
     -!- PTM: O-LINKED GLYCAN CONSISTS OF A GAL-GALNAC DISACCHARIDE, O-
CC
         GLYCOSYLATION IS ESSENTIAL FOR FULL BIOLOGICAL ACTIVITY.
CC
     -!- SIMILARITY: TO DROSOPHILA DROSOCIN.
KW
     Antibiotic; Glycoprotein; Insect immunity; Hemolymph.
FT
     CARBOHYD
                  11
                         11
                                  O-LINKED (GALNAC. . .).
SQ
     SEQUENCE
                16 AA; 1807 MW; 9C3CA3B00BC2E0AE CRC64;
  Query Match
                          40.0%; Score 2; DB 1; Length 16;
  Best Local Similarity 100.0%; Pred. No. 3.9e+03;
  Matches
            2; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
Qу
            3 RL 4
Db
           15 RL 16
RESULT 48
LPK1 LOCMI
ΙD
     LPK1 LOCMI
                    STANDARD;
                                   PRT;
                                           16 AA.
AC
     P20404;
DT
     01-FEB-1991 (Rel. 17, Created)
DT
     01-FEB-1994 (Rel. 28, Last sequence update)
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
DΕ
     Locustapyrokinin 1 (LOM-PK-1).
     Locusta migratoria (Migratory locust).
05
OC.
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
0C
     Neoptera; Orthopteroidea; Orthoptera; Caelifera; Acridomorpha;
OC
     Acridoidea; Acrididae; Oedipodinae; Locusta.
OX
    NCBI TaxID=7004;
RN
     [1]
RΡ
     SEQUENCE.
RC
     TISSUE=Corpora cardiaca;
RX
    MEDLINE=91224474; PubMed=2026322;
     Schoofs L., Holman G.M., Hayes T.K., Nachman R.J., de Loof A.;
RA
RT
     "Isolation, primary structure, and synthesis of locustapyrokinin: a
RT
    myotropic peptide of Locusta migratoria.";
RL
    Gen. Comp. Endocrinol. 81:97-104(1991).
     -!- FUNCTION: MEDIATES VISCERAL MUSCLE CONTRACTILE ACTIVITY
CC
CC
         (MYOTROPIC ACTIVITY).
     -!- SIMILARITY: BELONGS TO THE PYROKININ FAMILY.
CC
DR
    PIR; A49761; A49761.
DR
    InterPro; IPR001484; Pyrokinin.
DR
    PROSITE; PS00539; PYROKININ; 1.
KW
    Neuropeptide; Amidation; Pyrokinin; Pyrrolidone carboxylic acid.
FT
    MOD RES
                                 PYRROLIDONE CARBOXYLIC ACID.
                   1
                         1
    MOD RES
FT
                  16
                        16
                                 AMIDATION.
SQ
    SEQUENCE
               16 AA; 1827 MW; A7178BBDCA0AFDD6 CRC64;
 Query Match
                          40.0%; Score 2; DB 1; Length 16;
 Best Local Similarity 100.0%; Pred. No. 3.9e+03;
 Matches
           2; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
```

```
11
Db
           15 RL 16
RESULT 49
PGTL PELAC
ΙD
     PGTL PELAC
                    STANDARD;
                                    PRT;
                                            16 AA.
AC
     P80563;
DT
     01-FEB-1996 (Rel. 33, Created)
DT
     01-FEB-1996 (Rel. 33, Last sequence update)
     01-OCT-1996 (Rel. 34, Last annotation update)
DT
DE
     Pyrogallol hydroxyltransferase large subunit (EC 1.97.1.2)
DE
     (Transhydroxylase) (Fragment).
     Pelobacter acidigallici.
OS
OC
     Bacteria; Proteobacteria; Deltaproteobacteria; Desulfuromonadales;
OC
     Pelobacteraceae; Pelobacter.
OX
     NCBI_TaxID=35816;
RN
     [1]
RP
     SEQUENCE.
     STRAIN=DSM 2377 / Braunschweig;
RC
RX
     MEDLINE=96215436; PubMed=8647079;
RA
     Reichenbecher W., Ruediger A., Kroneck P.M.H., Schink B.;
RT
     "One molecule of molybdopterin guanine dinucleotide is associated
RT
     with each subunit of the heterodimeric Mo-Fe-S protein
RT
     transhydroxylase of Pelobacter acidigallici as determined by SDS/PAGE
RT
     and mass spectrometry.";
RL
     Eur. J. Biochem. 237:406-413(1996).
     -!- CATALYTIC ACTIVITY: 1,2,3,5-tetrahydroxybenzene + 1,2,3-
CC
CC
         trihydroxybenzene = 1,3,5-trihydroxybenzene + 1,2,3,5-
CC
         tetrahydroxybenzene.
CC
     -!- COFACTOR: MOLYBDENUM (MOLYBDOPTERIN).
CC
     -!- SUBUNIT: Heterodimer of a large and a small subunit.
DR
     PIR; S65430; S65430.
     Oxidoreductase; Molybdenum; Iron-sulfur.
KW
FT
     NON TER
                 16
                         16
     SEQUENCE
                16 AA; 1620 MW; 56348D53A0AD6EE3 CRC64;
SQ
  Query Match
                          40.0%; Score 2; DB 1; Length 16;
 Best Local Similarity 100.0%; Pred. No. 3.9e+03;
  Matches
            2; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
                                                                               0;
Qу
            3 RL 4
              \parallel \parallel
```

```
RESULT 50
YMOR PSEPU
ΙD
     YMOR PSEPU
                    STANDARD;
                                    PRT;
                                            16 AA.
AC
     Q02210;
DT
     01-JUN-1994 (Rel. 29, Created)
DT
     01-JUN-1994 (Rel. 29, Last sequence update)
     16-OCT-2001 (Rel. 40, Last annotation update)
DT
DE
     Hypothetical protein in morA 3'region (Fragment).
OS
     Pseudomonas putida.
OG
     Plasmid pMDH7.2.
     Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales;
OC
```

Db

5 RL 6

```
OC
     Pseudomonadaceae; Pseudomonas.
OX
    NCBI TaxID=303;
RN
     [1]
RΡ
     SEQUENCE FROM N.A.
RC
     STRAIN=M10;
RX
    MEDLINE=93199531; PubMed=8452544;
    Willey D.L., Caswell D.A., Lowe C.R., Bruce N.C.;
RA
RT
     "Nucleotide sequence and over-expression of morphine dehydrogenase, a
RT
    plasmid-encoded gene from Pseudomonas putida M10.";
RL
    Biochem. J. 290:539-544(1993).
     -----
CC
CC
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    between the Swiss Institute of Bioinformatics and the EMBL outstation -
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CC
CC
    -----
DR
    EMBL; M94775; AAB17357.1; -.
DR
    PIR; S30384; S30384.
KW
    Hypothetical protein; Plasmid.
FT
    NON TER 16 16
    SEQUENCE 16 AA; 1962 MW; A2F1EB8C172766ED CRC64;
SO
  Query Match
                       40.0%; Score 2; DB 1; Length 16;
  Best Local Similarity 100.0%; Pred. No. 3.9e+03;
  Matches 2; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
         2 SR 3
Qу
            9 SR 10
Search completed: November 28, 2003, 14:31:18
Job time : 13 secs
                          GenCore version 5.1.6
                Copyright (c) 1993 - 2003 Compugen Ltd.
OM protein - protein search, using sw model
              November 28, 2003, 14:27:18; Search time 33 Seconds
Run on:
                                      (without alignments)
                                      39.099 Million cell updates/sec
              US-09-228-866-45
Perfect score: 5
Sequence:
             1 XSRLX 5
Scoring table: OLIGO
              Gapop 60.0 , Gapext 60.0
Searched:
              830525 seqs, 258052604 residues
Word size : 0
```

```
Total number of hits satisfying chosen parameters: 8701
```

Minimum DB seq length: 5
Maximum DB seq length: 23

Post-processing: Listing first 100 summaries

```
Database :
                SPTREMBL_23:*
                1: sp_archea:*
                2: sp_bacteria:*
                3: sp_fungi:*
                4: sp human:*
                5: sp_invertebrate:*
6: sp_mammal:*
                7: sp_mhc:*
                8: sp organelle:*
                9: sp_phage:*
                10: sp_plant:*
                11: sp_rodent:*
                12: sp_virus:*
                13: sp_vertebrate:*
                14: sp_unclassified:*
                15: sp_rvirus:*
                16:
                     sp_bacteriap:*
                17: sp_archeap:*
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	DB	ID	Description
1	3	60.0	9	4	Q9UC36	Q9uc36 homo sapien
2	3	60.0	10	15	Q8UT83	Q8ut83 human immun
3	3	60.0	11	2	P77404	P77404 escherichia
4	3	60.0	13	6	Q9TRW6	Q9trw6 bos taurus
5	3	60.0	14	2	P83159	P83159 anabaena sp
6	3	60.0	15	4	P78533	P78533 homo sapien
7	3	60.0	16	4	Q9UP51	Q9up51 homo sapien
8	3	60.0	16	4	Q96RT5	Q96rt5 homo sapien
9	3	60.0	18	6	046592	046592 capra hircu
10	3	60.0	19	4	Q96ER8	Q96er8 homo sapien
11	3	60.0	19	5	Q8T8B6	Q8t8b6 ciona intes
12	3	60.0	19	6	Q95J98	Q95j98 sus scrofa
13	3	60.0	19	10	Q8GS32	Q8gs32 hordeum vul
14	3	60.0	20	13	Q9PRV5	Q9prv5 xenopus lae
15	3	60.0	21	2	Q9R4R7	Q9r4r7 streptomyce
16	3	60.0	21	2	Q9R890	Q9r890 chlamydia t
17	3	60.0	21	2	Q53014	Q53014 rhizobium e
18	3	60.0	21	4	Q96D65	Q96d65 homo sapien
19	3	60.0	21	11	Q9ESX0	Q9esx0 mus musculu
20	3	60.0	22	4	015289	O15289 homo sapien
21	3	60.0	22	4	Q96Q47	Q96q47 homo sapien

22	3	60.0	22	11 Q9JLD6	Q9jld6 mesocricetu
23	3	60.0	22	12 Q84172	Q84172 orf virus.
24	3	60.0	23	2 Q9ZG66	Q9zg66 chlamydia t
25	3	60.0	23	2 086987	086987 proteus mir
26	3	60.0	23	4 Q9UC00	Q9uc00 homo sapien
27	2	40.0	6	10 P82181	
28	2	40.0			P82181 spinacia ol
			6	10 P82182	P82182 spinacia ol
29	2	40.0	7	2 050556	050556 actinobacil
30	2	40.0	7	8 P92214	P92214 amblyopyrum
31	2	40.0	7	8 P92393	P92393 hordeum vul
32	2	40.0	7	8 P92403	P92403 lophopyrum
33	2	40.0	7	8 P92427	P92427 peridictyon
34	2	40.0	7	8 P92430	P92430 aegilops ta
35	2	40.0	7	8 P92221	P92221 bromus iner
36	2	40.0	7	8 P92425	P92425 pseudoroegn
37	2	40.0	7	8 P92381	P92381 hordeum bra
38	2	40.0	7	8 P92387	P92387 henrardia p
39	2	40.0	7	8 P92210	P92210 agropyron c
40	2	40.0	7	8 P92440	P92440 thinopyrum
41	2	40.0	7	8 P92218	
42	2	40.0	7		P92218 australopyr
					P92390 heteranthel
43	2	40.0	7	8 P92372	P92372 haynaldia v
44	2	40.0	7	8 P92442	P92442 taeniatheru
45	2	40.0	7	8 P92226	P92226 crithopsis
46	2	40.0	7	8 P92385	P92385 hordeum mar
47	2	40.0	7	8 P92421	P92421 psathyrosta
48	2	40.0	7	10 P93233	P93233 lycopersico
49	2	40.0	8	2 P72279	P72279 rhodococcus
50	2	40.0	8	2 Q934S4	Q934s4 thiobacillu
51	2	40.0	8	2 Q51594	Q51594 escherichia
52	2	40.0	8	4 Q15898	Q15898 homo sapien
53	2	40.0	8	4 Q15888	Q15888 homo sapien
54	2	40.0	8	4 Q8TF70	Q8tf70 homo sapien
55	2	40.0	8	5 015899	015899 babesia ovi
56	2	40.0	8	5 Q94623	
57	2	40.0	8	8 019957	Q94623 manduca sex
58	2	40.0			019957 gossypium h
59	2		8		019961 gossypium d
		40.0	8	8 019958	019958 gossypium b
60	2	40.0	8	8 Q9T4Y2	Q9t4y2 asterina pe
61	2	40.0	8	8 019960	019960 gossypium m
62	2	40.0	8	8 019959	019959 gossypium t
63	2	40.0	8	8 019956	019956 gossypium a
64	2	40.0	8	11 Q9ET18	Q9et18 mus spretus
65	2	40.0	8	11 Q8R5M9	Q8r5m9 mus musculu
66	2	40.0	8	11 Q99P40	Q99p40 mus musculu
67	2	40.0	8	11 Q9ET17	Q9et17 mus caroli
68	2	40.0	8	11 Q9ET16	Q9et16 mesocricetu
69	2	40.0	8	12 089965	O89965 polyomaviru
70	2	40.0	9	2 Q45852	Q45852 clostridium
71	2	40.0	9	2 Q51765	Q51765 pseudomonas
72	2	40.0	9	4 Q9UKJ6	
73	2	40.0	9	4 Q14715	Q9ukj6 homo sapien
74	2	40.0	9		Q14715 homo sapien
75	2	40.0		~	Q9ue26 homo sapien
75 76	2		9	5 Q9TWD6	Q9twd6 leptinotars
		40.0	9	8 Q9TKF2	Q9tkf2 asteromyrtu
77	2	40.0	9	8 Q9TLM7	Q9tlm7 laurencia v
78	2	40.0	9	8 Q9TKG1	Q9tkg1 calothamnus

```
79
                    9 11 088889
        2 40.0
                                                  088889 mus musculu
 80
        2 40.0
                    9 12 P90359
                                                  P90359 barley mild
81
        2 40.0
                    9 12
                          Q8QVD3
                                                 Q8qvd3 ovine respi
        2 40.0
82
                    9 12 069349
                                                  Q69349 herpes simp
83
        2 40.0
                    9 12 Q9IBM8
                                                 Q9ibm8 simian viru
84
        2 40.0
                    9 12 Q9PYK1
                                                 Q9pykl simian viru
85
        2 40.0
                    9 15 012096
                                                 012096 caprine art
86
        2 40.0
                    9 15 012100
                                                 012100 caprine art
87
        2 40.0
                    9 15 012102
                                                 012102 caprine art
88
        2 40.0
                    9 15 012098
                                                 012098 caprine art
89
                    9 15 012104
        2
           40.0
                                                 012104 caprine art
90
          40.0
        2
                    9 15 Q64972
                                                 Q64972 avian rous-
        2 40.0
91
                   10 2 Q50032
                                                 Q50032 mycobacteri
92
        2 40.0
                  10 4 09UCU6
                                                 Q9ucu6 homo sapien
93
        2 40.0
                  10 5 Q8WPE7
                                                 Q8wpe7 skogsbergia
94
                   10 6 Q8SPN8
        2 40.0
                                                 Q8spn8 macaca mula
95
        2 40.0
                   10 8 Q9TKF7
                                                 Q9tkf7 agonis gran
96
        2
           40.0
                  10 8 Q9TKF9
                                                 Q9tkf9 melaleuca v
97
        2 40.0
                  10 8 Q9TKG2
                                                Q9tkg2 callistemon
98
        2 40.0
                   10 8 Q9TKF5
                                                 Q9tkf5 agonis spat
99
       2 40.0
                   10 8 Q9TKF1
                                                 Q9tkfl homalosperm
100
       2 40.0
                  10 8 Q9TKF8
                                                Q9tkf8 tristaniops
```

ALIGNMENTS

```
RESULT 1
Q9UC36
ΙD
     Q9UC36
                 PRELIMINARY;
                                   PRT:
                                            9 AA.
AC
     01-MAY-2000 (TrEMBLrel. 13, Created)
DT
\mathsf{DT}
     01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
     01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
DT
DE
     28 kDa heat shock protein homolog fragment 1 (Fragment).
OS
     Homo sapiens (Human).
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
     Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OC
OX
     NCBI TaxID=9606;
RN
     [1]
RP
     SEQUENCE.
     MEDLINE=92218434; PubMed=1560006;
RX
     Kato K., Shinohara H., Goto S., Inaguma Y., Morishita R., Asano T.;
RA
     "Copurification of small heat shock protein with alpha B crystallin
RT
RТ
     from human skeletal muscle.";
     J. Biol. Chem. 267:7718-7725(1992).
RL
FT
    NON TER
                  1
                          1
FΤ
     NON TER
                   9
                          9
SQ
     SEQUENCE
                9 AA; 1220 MW; 26933415B1F77B43 CRC64;
  Query Match
                          60.0%; Score 3; DB 4; Length 9;
  Best Local Similarity 100.0%; Pred. No. 8.3e+05;
          3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
Qу
            2 SRL 4
              |\cdot|
Db
            6 SRL 8
```

```
RESULT 2
O8UT83
ΙD
     Q8UT83
                  PRELIMINARY;
                                    PRT:
                                            10 AA.
AC
     Q8UT83;
     01-MAR-2002 (TrEMBLrel. 20, Created)
DT
     01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
DT
DT
     01-OCT-2002 (TrEMBLrel. 22, Last annotation update)
DE
     Vpu protein.
GN
     VPU.
OS
     Human immunodeficiency virus 1.
     Viruses; Retroid viruses; Retroviridae; Lentivirus.
OC
OX
     NCBI TaxID=11676;
RN
     [1]
RΡ
     SEQUENCE FROM N.A.
RC
     STRAIN=00BW1795.6;
RA
     Novitsky V.A., Smith U.R., Gilbert P., McLane M.F., Chigwedere P.,
     Williamson C., Ndung'u T., Klein I., Chang S.-Y., Peter T., Thior I.,
RA
     Foley B.T., Gaolekwe S., Rybak N., Gaseitsiwe S., Vannberg F.,
RA
RA
     Marlink R., Lee T.-H., Essex M.;
     "HIV-1 subtype C molecular phylogeny: consensus sequence for an AIDS
RT
RT
     vaccine design.";
     Submitted (OCT-2001) to the EMBL/GenBank/DDBJ databases.
RL
DR
     EMBL; AF443097; AAL34766.1; -.
     SEQUENCE 10 AA; 1264 MW; 91E52CB33321B37A CRC64;
SO
  Query Match
                          60.0%; Score 3; DB 15; Length 10;
  Best Local Similarity
                          100.0%; Pred. No. 1.6e+03;
             3; Conservative
                               0; Mismatches
                                                 0; Indels
                                                                  0; Gaps
                                                                               0;
            2 SRL 4
Qу
              | | |
            8 SRL 10
RESULT 3
P77404
ID
     P77404
                 PRELIMINARY;
                                   PRT;
                                           11 AA.
AC
     P77404:
     01-FEB-1997 (TrEMBLrel. 02, Created)
DT
DT
     01-FEB-1997 (TrEMBLrel. 02, Last sequence update)
DT
     01-NOV-1998 (TrEMBLrel. 08, Last annotation update)
DE
     DNA sequence downstream of the ECOPRRI HSD locus (Fragment).
GN
     HSDR.
OS
     Escherichia coli.
OC
     Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
OC
     Enterobacteriaceae; Escherichia.
OX
     NCBI TaxID=562;
RN
     [1]
RP
     SEQUENCE FROM N.A.
RX
     MEDLINE=97206151; PubMed=9157244;
     Tyndall C., Lehnherr H., Sandmeier U., Kulik E., Bickle T.A.;
RA
     "The type IC had loci of the enterobacteria are flanked by DNA with
RT
     high homology to the phage Pl genome: implications for the evolution
RT
RT
     and spread of DNA restriction systems.";
    Mol. Microbiol. 23:729-736(1997).
RL
```

```
EMBL; X98145; CAA66840.1; -.
 DR
 DR
     EMBL; X98144; CAA66839.1; -.
 FT
     NON TER
                   1
                          1
SO
     SEQUENCE
                11 AA; 1259 MW; 714AB092A4072734 CRC64;
  Query Match
                          60.0%; Score 3; DB 2; Length 11;
  Best Local Similarity 100.0%; Pred. No. 1.7e+03;
            3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
            2 SRL 4
QУ
              Db
            3 SRL 5
RESULT 4
O9TRW6
ID
     Q9TRW6
                 PRELIMINARY;
                                   PRT;
                                           13 AA.
AC
     Q9TRW6;
DT
     01-MAY-2000 (TrEMBLrel. 13, Created)
DT
     01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT
     01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
DE
     25 kDa protein P25, peptide F3 (Fragment).
OS
     Bos taurus (Bovine).
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
OC
     Bovidae; Bovinae; Bos.
OX
     NCBI TaxID=9913;
RN
     [1]
RΡ
     SEQUENCE.
RX
     MEDLINE=91372400; PubMed=1909972;
     Takahashi M., Tomizawa K., Ishiguro K., Sato K., Omori A., Sato S.,
RA
RA
     Shiratsuchi A., Uchida T., Imahori K.;
RT
     "A novel brain-specific 25 kDa protein (p25) is phosphorylated by a
RT
     Ser/Thr-Pro kinase (TPK II) from tau protein kinase fractions.";
     FEBS Lett. 289:37-43(1991).
RL
FT
     NON TER
                  1
     NON TER
FT
                 13
                         13
SQ
     SEQUENCE 13 AA; 1375 MW; 2C2822494805D1B7 CRC64;
  Query Match
                          60.0%; Score 3; DB 6; Length 13;
  Best Local Similarity 100.0%; Pred. No. 1.9e+03;
  Matches
            3; Conservative 0; Mismatches 0; Indels
                                                              0; Gaps
                                                                             0;
Qу
            2 SRL 4
              Dh
            9 SRL 11
RESULT 5
P83159
ΙD
     P83159
                PRELIMINARY;
                                  PRT;
                                          14 AA.
AC
     P83159;
DT
     01-DEC-2001 (TrEMBLrel. 19, Created)
DT
     01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT
     01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
     Phycobilisome 32.1 kDa linker polypeptide, phycocyanin-associated,
DE
DE
    rod (Fragment).
```

```
OS
     Anabaena sp. (strain L31).
OC
      Bacteria; Cyanobacteria; Nostocales; Nostocaceae; Anabaena.
OX
     NCBI TaxID=29412;
RN
     [1]
     SEQUENCE.
RΡ
RA
     Apte S.K., Uhlemann E., Schmid R., Altendorf K.;
RL
     Submitted (OCT-2001) to the SWISS-PROT data bank.
     -!- FUNCTION: ROD LINKER PROTEIN, ASSOCIATED WITH PHYCOCYANIN. LINKER
CC
CC
         POLYPEPTIDES DETERMINE THE STATE OF AGGREGATION AND THE LOCATION
CC
         OF THE DISC-SHAPED PHYCOBILIPROTEIN UNITS WITHIN THE PHYCOBILISOME
CC
         AND MODULATE THEIR SPECTROSCOPIC PROPERTIES IN ORDER TO MEDIATE A
CC
         DIRECTED AND OPTIMAL ENERGY TRANSFER.
CC
     -!- SUBCELLULAR LOCATION: THIS PROTEIN OCCURS IN THE ROD, IT IS
CC
         ASSOCIATED WITH PHYCOCYANIN (BY SIMILARITY).
CC
     -!- SIMILARITY: TO OTHER PHYCOBILISOME LINKER PROTEINS.
KW
     Phycobilisome; Photosynthesis.
FT
     NON TER
                14
                        14
SQ
     SEQUENCE
                14 AA; 1405 MW; 96823E44F60A3115 CRC64;
  Query Match
                          60.0%; Score 3; DB 2; Length 14;
  Best Local Similarity
                          100.0%; Pred. No. 2.1e+03;
  Matches
            3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                            0;
            2 SRL 4
Qу
              Db
            7 SRL 9
RESULT 6
P78533
ΙD
     P78533
                 PRELIMINARY;
                                   PRT:
                                          15 AA.
AC
     P78533;
     01-MAY-1997 (TrEMBLrel. 03, Created)
DT
     01-MAY-1997 (TrEMBLrel. 03, Last sequence update)
DT
     01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
\mathsf{D}\mathbf{T}
     Deoxyguanosine kinase (EC 2.7.1.113) (Fragment).
DΕ
GN
     DGK.
0S
     Homo sapiens (Human).
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC.
     Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OC.
OX
     NCBI TaxID=9606;
RN
     [1]
RP
     SEQUENCE FROM N.A.
RA
     Johansson M., Karlsson A.;
     Submitted (JUN-1996) to the EMBL/GenBank/DDBJ databases.
RL
DR
     EMBL; U62042; AAB48932.1; -.
KW
     Kinase; Transferase.
FT
     NON TER
                15
              15 AA; 1706 MW; 53575609CC614F8E CRC64;
SQ
     SEQUENCE
  Query Match
                          60.0%; Score 3; DB 4; Length 15;
  Best Local Similarity 100.0%; Pred. No. 2.2e+03;
           3; Conservative 0; Mismatches 0; Indels 0; Gaps
 Matches
                                                                           0;
Qу
            2 SRL 4
              111
Db
            9 SRL 11
```

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RESULT 7
Q9UP51
ΙD
     Q9UP51
                  PRELIMINARY;
                                    PRT;
                                             16 AA.
AC
     Q9UP51;
DT
     01-MAY-2000 (TrEMBLrel. 13, Created)
     01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT
     01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DT
DE
     Prolactin (Fragment).
GN
     PROLACTIN.
OS
     Homo sapiens (Human).
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OC
OX
     NCBI TaxID=9606;
RN
     [1]
RΡ
     SEQUENCE FROM N.A.
RX
     MEDLINE=84264464; PubMed=6146607;
RA
     Takahashi H., Nabeshima Y., Nabeshima Y., Ogata K., Takeuchi S.;
     "Molecular cloning and nucleotide sequence of DNA complementary to
RT
RT
     human decidual prolactin mRNA.";
RL
     J. Biochem. 95:1491-1499(1984).
RN
     [2]
RΡ
     SEQUENCE FROM N.A.
RA
     Stevens F.R.A., Hajeer A., John S., Thomson W., Worthington J.,
     Davis J.R.E., Ollier W.E.R.;
RA
     Submitted (MAY-1998) to the EMBL/GenBank/DDBJ databases.
RL
DR
     EMBL; AF068859; AAD12943.1; -.
FT
     NON TER
                   1
                          1
FT
     NON TER
                   16
                          16
SO
     SEQUENCE
                16 AA; 1877 MW; 388F0E599FCA3F2F CRC64;
  Query Match
                           60.0%; Score 3; DB 4; Length 16;
  Best Local Similarity
                           100.0%; Pred. No. 2.3e+03;
            3; Conservative 0; Mismatches 0; Indels
  Matches
                                                                   0; Gaps
                                                                                0;
Qv
            2 SRL 4
              \perp
Db
            9 SRL 11
RESULT 8
Q96RT5
ID
     Q96RT5
                 PRELIMINARY;
                                    PRT;
                                            16 AA.
AC
     Q96RT5;
\mathsf{DT}
     01-DEC-2001 (TrEMBLrel. 19, Created)
\mathsf{D}\mathbf{T}
     01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
     01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DT
DE
     Tuberous sclerosis 1 (Fragment).
GN
     TSC1.
     Homo sapiens (Human).
OS
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX
     NCBI TaxID=9606;
RN
     [1]
RΡ
     SEQUENCE FROM N.A.
     Fang L., Wu Z.Y., Wang N., MuRong S.X., Lin M.T., Chao D.R.,
RA
```

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RA
     Fang Z.M.;
RL
     Submitted (JUN-2000) to the EMBL/GenBank/DDBJ databases.
DR
     EMBL; AF274227; AAK60414.1; -.
FT
     NON TER
                   1
                         1
FT
     NON TER
                  16
                         16
                16 AA; 1826 MW; 895C250451E3BBEE CRC64;
SQ
     SEQUENCE
  Query Match
                          60.0%; Score 3; DB 4; Length 16;
                          100.0%; Pred. No. 2.3e+03;
  Best Local Similarity
             3; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
                                                                              0;
Qу
            2 SRL 4
              111
Db
            2 SRL 4
RESULT 9
046592
ΙD
                 PRELIMINARY;
     046592
                                   PRT;
                                           18 AA.
AC
     046592;
     01-JUN-1998 (TrEMBLrel. 06, Created)
DT
DT
     01-JUN-1998 (TrEMBLrel. 06, Last sequence update)
     01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DT
DE
     Prolactin receptor short form (Fragment).
OS
     Capra hircus (Goat).
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
     Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
OC
OC
     Bovidae; Caprinae; Capra.
OX
     NCBI_TaxID=9925;
RN
     [1]
RР
     SEQUENCE FROM N.A.
RX
     MEDLINE=98001468; PubMed=9343303;
RA
     Bignon C., Binart N., Ormandy C., Schuler L.A., Kelly P.A., Djiane J.;
RT
     "Long and short forms of the ovine prolactin receptor: cDNA cloning
RT
     and genomic analysis reveal that the two forms arise by different
RT
     alternative splicing mechanisms in ruminants and in rodents.";
     J. Mol. Endocrinol. 19:109-120(1997).
RL
RN
     [2]
RP
     SEQUENCE FROM N.A.
RA
     Bignon C.;
RL
     Submitted (JAN-1998) to the EMBL/GenBank/DDBJ databases.
DR
     EMBL; AF042781; AAB97749.1; -.
KW
     Receptor.
FT
     NON TER
                   1
SQ
     SEQUENCE
                18 AA; 2086 MW; 8C2297FA8816328D CRC64;
 Query Match
                          60.0%; Score 3; DB 6; Length 18;
 Best Local Similarity
                         100.0%; Pred. No. 2.5e+03;
            3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
           2 SRL 4
Qу
              \mathbf{H}
Db
           12 SRL 14
```

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ΙD
     Q96ER8
                  PRELIMINARY;
                                    PRT;
                                            19 AA.
AC
     Q96ER8;
     01-DEC-2001 (TrEMBLrel. 19, Created)
DT
     01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT
     01-OCT-2002 (TrEMBLrel. 22, Last annotation update)
DT
DΕ
     Hypothetical protein (Fragment).
     Homo sapiens (Human).
OS
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX
     NCBI TaxID=9606;
RN
     [1]
RΡ
     SEQUENCE FROM N.A.
RC
     TISSUE=Testis, and Embryonic carcinoma;
RA
     Strausberg R.;
RL
     Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.
DR
     EMBL; BC011998; AAH11998.1; -.
KW
     Hypothetical protein.
FT
     NON TER
                   1
SQ
     SEQUENCE
                19 AA; 2180 MW; 137DB66BEE0B9B59 CRC64;
  Query Match
                           60.0%; Score 3; DB 4; Length 19;
  Best Local Similarity
                          100.0%; Pred. No. 2.7e+03;
             3; Conservative 0; Mismatches
                                                                  0; Gaps
                                                    0; Indels
                                                                              0;
Qу
            2 SRL 4
              | | |
           11 SRL 13
RESULT 11
Q8T8B6
                 PRELIMINARY;
ΙD
     Q8T8B6
                                   PRT;
                                            19 AA.
AC
     Q8T8B6;
DT
     01-JUN-2002 (TrEMBLrel. 21, Created)
     01-JUN-2002 (TrEMBLrel. 21, Last sequence update)
DT
     01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
DT
DE
     Choline acetyltransferase (Fragment).
GN
     CI-CHAT.
0S
     Ciona intestinalis.
OC
     Eukaryota; Metazoa; Chordata; Urochordata; Ascidiacea; Enterogona;
OC
     Phlebobranchia; Cionidae; Ciona.
OX
     NCBI_TaxID=7719;
RN
     [1]
RΡ
     SEQUENCE FROM N.A.
     MEDLINE=21863848; PubMed=11875658;
RX
     Takamura K., Egawa T., Ohnishi S., Okada T., Fukuoka T.;
RA
RТ
     "Developmental expression of ascidian neurotransmitter synthesis
RТ
    genesI. Choline acetyltransferase and acetylcholine transporter
RT
    genes.";
RL
    Dev. Genes Evol. 212:50-53(2002).
DR
    EMBL; AB072000; BAB85861.1; -.
KW
    Transferase.
FT
    NON TER
                  19
                         19
SO
                19 AA; 2176 MW; 36DC3BCDC6AB922F CRC64;
    SEQUENCE
 Query Match
                          60.0%; Score 3; DB 5; Length 19;
 Best Local Similarity 100.0%; Pred. No. 2.7e+03;
```

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Matches 3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                              0;
Qу
            2 SRL 4
              111
           15 SRL 17
Db
RESULT 12
Q95J98
ID
     Q95J98
                 PRELIMINARY;
                                   PRT;
                                           19 AA.
AC
     Q95J98;
     01-DEC-2001 (TrEMBLrel. 19, Created)
DΤ
DT
     01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
     01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
\mathsf{D}\mathbf{T}
DΕ
     Laminin gamma 1 chain (Fragment).
OS
     Sus scrofa (Piq).
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
OX
     NCBI TaxID=9823;
RN
     [1]
RP
     SEQUENCE FROM N.A.
     TISSUE=Cardiovascular;
RC
     Markmann A., Kresse H.;
RA
RT
     "Regulation of VSMC Differentiation.";
     Submitted (DEC-2000) to the EMBL/GenBank/DDBJ databases.
RL
DR
     EMBL; AF330204; AAL09470.1; -.
FT
     NON TER
                  1
                          1
     NON TER
FT
                  19
                         19
SQ
     SEQUENCE
                19 AA; 2214 MW; 8D3245EE2DD7EB6C CRC64;
  Query Match
                          60.0%; Score 3; DB 6; Length 19;
  Best Local Similarity 100.0%; Pred. No. 2.7e+03;
  Matches
            3; Conservative
                                0; Mismatches 0; Indels 0; Gaps
                                                                              0;
Оv
            2 SRL 4
              Db
           11 SRL 13
RESULT 13
Q8GS32
ID
     Q8GS32
                 PRELIMINARY;
                                   PRT;
                                           19 AA.
AC
     Q8GS32;
DT
     01-MAR-2003 (TrEMBLrel. 23, Created)
DT
     01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
DT
     01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
DE
     MLA13uORF 1.
OS
     Hordeum vulgare (Barley).
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
     Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooideae;
OC.
OC
     Triticeae; Hordeum.
OX
     NCBI TaxID=4513;
RN
     [1]
RΡ
     SEQUENCE FROM N.A.
RA
     Halterman D.A., Wei F., Wise R.P.;
RT
     "Powdery mildew-induced Mla mRNAs are alternatively spliced and
RT
     contain multiple upstream open reading frames.";
```

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RL
     Plant Physiol. 0:0-0(2003).
DR
     EMBL; AF523679; AA016002.1; -.
DR
     EMBL; AF523680; AA016006.1; -.
DR
     EMBL; AF523681; AA016009.1; -.
DR
     EMBL; AF523682; AA016012.1; -.
DR
     EMBL; AF523683; AA016015.1; -.
                19 AA; 2289 MW; 872EAC1EB20D2EAF CRC64;
SQ
     SEQUENCE
  Query Match
                          60.0%; Score 3; DB 10; Length 19;
  Best Local Similarity
                          100.0%; Pred. No. 2.7e+03;
  Matches
            3; Conservative 0; Mismatches
                                                   0; Indels
                                                                 0; Gaps
                                                                              0;
Qу
            2 SRL 4
              | \cdot |
Db
            6 SRL 8
RESULT 14
Q9PRV5
ID
     Q9PRV5
                 PRELIMINARY;
                                   PRT;
                                           20 AA.
AC
     Q9PRV5;
DT
     01-MAY-2000 (TrEMBLrel. 13, Created)
DT
     01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT
     01-MAY-2000 (TrEMBLrel. 13, Last annotation update)
DΕ
     NI(2+)-binding protein, PNIXB (Fragment).
OS
     Xenopus laevis (African clawed frog).
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
OC
OC.
     Xenopodinae; Xenopus.
OX
     NCBI_TaxID=8355;
RN
     [1]
RΡ
     SEQUENCE.
RX
     MEDLINE=95000642; PubMed=7917276;
RA
     Grbac-Ivankovic S., Antonijczuk K., Varghese A.H., Plowman M.C.,
RA
     Antonijczuk A., Korza G., Ozols J., Sunderman F.W.Jr.;
     "Lipovitellin 2 beta is the 31 kD Ni(2+)-binding protein (pNiXb) in
RT
RT
     Xenopus oocytes and embryos.";
RL
     Mol. Reprod. Dev. 38:256-263(1994).
SQ
     SEQUENCE
              20 AA; 2318 MW; 9681AB6C0E5BAE44 CRC64;
  Query Match
                          60.0%; Score 3; DB 13; Length 20;
  Best Local Similarity 100.0%; Pred. No. 2.8e+03;
  Matches
            3; Conservative
                               0; Mismatches
                                                 0; Indels
                                                                 0; Gaps
                                                                              0;
Qу
            2 SRL 4
              111
Db
           16 SRL 18
RESULT 15
09R4R7
ID
     Q9R4R7
                 PRELIMINARY;
                                   PRT:
                                           21 AA.
AC
     Q9R4R7;
     01-MAY-2000 (TrEMBLrel. 13, Created)
DT
     01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
     01-JUN-2000 (TrEMBLrel. 14, Last annotation update)
DT
    CLAVAMINATE synthase isozyme 3 (Fragment).
DE
```

```
OS
     Streptomyces antibioticus.
OC
     Bacteria; Actinobacteria; Actinobacteridae; Actinomycetales;
OC
     Streptomycineae; Streptomycetaceae; Streptomyces.
OX
     NCBI TaxID=1890;
RN
     [1]
     SEQUENCE.
RΡ
    MEDLINE=95197540; PubMed=7890654;
RX
RA
     Janc J.W., Egan L.A., Townsend C.A.;
RT
     "Purification and characterization of clavaminate synthase from
     Streptomyces antibioticus. A multifunctional enzyme of clavam
RT
RT
     biosynthesis.";
     J. Biol. Chem. 270:5399-5404(1995).
RL
SO
                21 AA; 2222 MW; E5012FAA658F5A5A CRC64;
  Query Match
                          60.0%; Score 3; DB 2; Length 21;
  Best Local Similarity 100.0%; Pred. No. 2.9e+03;
                                                  0; Indels
            3; Conservative 0; Mismatches
                                                                 0; Gaps
                                                                              0:
Qу
            2 SRL 4
              111
Db
           18 SRL 20
RESULT 16
09R890
ΙD
     Q9R890
                 PRELIMINARY;
                                   PRT;
                                           21 AA.
AC
     Q9R890;
DT
     01-MAY-2000 (TrEMBLrel. 13, Created)
DT
     01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT
     01-MAY-2000 (TrEMBLrel. 13, Last annotation update)
DE
     Hypothetical 2.3 kDa protein (Fragment).
OS
     Chlamydia trachomatis.
OC
     Bacteria; Chlamydiae; Chlamydiales; Chlamydiaceae; Chlamydia.
OX
     NCBI TaxID=813;
RN
     [1]
RΡ
     SEQUENCE FROM N.A.
RC
     STRAIN=L2 434B;
RA
     Wang L., Steenburg S.D., Zheng Y., Larsen S.H.;
RT
     "Gene identification of Chlamydia trachomatis by random DNA
RT
     sequencing.";
RL
     Submitted (AUG-1998) to the EMBL/GenBank/DDBJ databases.
DR
     EMBL; AF087312; AAD04087.1; -.
KW
     Hypothetical protein.
FT
     NON TER
                  21
                         2.1
SQ
     SEQUENCE
                21 AA; 2346 MW; 5A282DC334CEB5EF CRC64;
  Query Match
                          60.0%; Score 3; DB 2; Length 21;
  Best Local Similarity 100.0%; Pred. No. 2.9e+03;
  Matches
             3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                              0;
Qу
            2 SRL 4
              | \cdot |
            9 SRL 11
Db
```

RESULT 17 053014

```
PRT;
ID
    Q53014
                 PRELIMINARY;
                                           21 AA.
AC
     Q53014;
DT
     01-NOV-1996 (TrEMBLrel. 01, Created)
     01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT
     01-NOV-1998 (TrEMBLrel. 08, Last annotation update)
DT
DΕ
     Nitrogenase alpha subunit (NifD) truncated (Fragment).
     Rhizobium etli.
OS
OC
     Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales;
OC
     Rhizobiaceae; Rhizobium.
OX
    NCBI TaxID=29449;
RN
     [1]
RΡ
     SEQUENCE FROM N.A.
RC
    STRAIN=CE-3;
    MEDLINE=96236026; PubMed=8655489;
RX
     Valderrama B., Davalos A., Girard L., Morett E., Mora J.;
RA
RT
     "Regulatory proteins and cis-acting elements involved in the
RT
     transcriptional control of Rhizobium etli reiterated nifH genes.";
RT.
    J. Bacteriol. 178:3119-3126(1996).
DR
    EMBL; L13618; AAB07744.1; -.
FT
     NON TER
                  21
                         21
SQ
     SEQUENCE
                21 AA; 2490 MW; 19282319A357D445 CRC64;
 Query Match
                          60.0%; Score 3; DB 2; Length 21;
 Best Local Similarity 100.0%; Pred. No. 2.9e+03;
             3; Conservative 0; Mismatches
                                                 0; Indels
                                                                  0; Gaps
                                                                              0;
Qу
            2 SRL 4
              | | |
Dh
           16 SRL 18
RESULT 18
Q96D65
                 PRELIMINARY;
ID
    096D65
                                   PRT:
                                           21 AA.
AC
     Q96D65;
DT
     01-DEC-2001 (TrEMBLrel. 19, Created)
DT
     01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT
     01-OCT-2002 (TrEMBLrel. 22, Last annotation update)
DΕ
     Hypothetical protein.
OS
     Homo sapiens (Human).
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX
    NCBI_TaxID=9606;
RN
    [1]
RΡ
     SEQUENCE FROM N.A.
RC
    TISSUE=Brain;
RA
     Strausberg R.;
RI.
     Submitted (AUG-2001) to the EMBL/GenBank/DDBJ databases.
DR
     EMBL; BC012895; AAH12895.1; -.
KW
    Hypothetical protein.
SQ
    SEQUENCE 21 AA; 2355 MW; 3F3C4E923AAB9327 CRC64;
 Query Match
                          60.0%; Score 3; DB 4; Length 21;
 Best Local Similarity 100.0%; Pred. No. 2.9e+03;
            3; Conservative 0; Mismatches 0; Indels
 Matches
                                                                  0; Gaps
```

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RESULT 19
Q9ESX0
                 PRELIMINARY;
                                   PRT;
                                            21 AA.
ΙD
    Q9ESX0
AC
     Q9ESX0;
DT
     01-MAR-2001 (TrEMBLrel. 16, Created)
     01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
DT
     01-OCT-2002 (TrEMBLrel. 22, Last annotation update)
DT
DE
     Gephyrin (Fragment).
GN
     GPHN OR GEPHYRIN.
OS
    Mus musculus (Mouse).
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
OC
     Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
     NCBI TaxID=10090;
OX
RN
     [1]
RΡ
     SEQUENCE FROM N.A.
RX
     MEDLINE=20420367; PubMed=10963686;
RA
     Ramming M., Kins S., Werner N., Hermann A., Betz H., Kirsch J.;
RT
     "Diversity and phylogeny of gephyrin: Tissue-specific splice variants,
RT
     gene structure, and sequence similarities to molybdenum cofactor-
RT
     synthesizing and cytoskeleton-associated proteins.";
RL
     Proc. Natl. Acad. Sci. U.S.A. 97:10266-10271(2000).
     EMBL; AJ278768; CAC06105.1; -.
DR
DR
     MGD; MGI:109602; Gphn.
FT
     NON TER
                  1
                         1
FT
     NON TER
                  21
                         21
     SEQUENCE
                21 AA; 2627 MW; 0820F760BC776F9A CRC64;
SQ
                          60.0%; Score 3; DB 11; Length 21;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 2.9e+03;
            3; Conservative 0; Mismatches 0; Indels
  Matches
                                                                  0; Gaps
            2 SRL 4
Qу
              111
            3 SRL 5
Db
RESULT 20
015289
ID
     015289
                PRELIMINARY;
                                    PRT;
                                            22 AA.
AC
     015289;
     01-JAN-1998 (TrEMBLrel. 05, Created)
DT
DT
     01-JAN-1998 (TrEMBLrel. 05, Last sequence update)
\mathsf{D}\mathsf{T}
     01-MAR-2002 (TrEMBLrel. 20, Last annotation update)
DΕ
     Aldose reductase (Fragment).
OS
     Homo sapiens (Human).
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX
     NCBI TaxID=9606;
RN
RP
     SEQUENCE FROM N.A.
     MEDLINE=95309538; PubMed=7789640;
RX
     Ko B.C., Lam K.S., Wat N.M., Chung S.S.;
RA
RT
     "An (A-C)n dinucleotide repeat polymorphic marker at the 5' end of the
```

```
RT
     aldose reductase gene is associated with early-onset diabetic
RT
     retinopathy in NIDDM patients.";
     Diabetes 44:727-732(1995).
RL
RN
     [2]
RΡ
     SEQUENCE FROM N.A.
RA
     Ko B.C., Chung S.S.;
     "Identification and characterization of multiple osmotic respnse
RT
RT
     sequences in the aldose reductase gene.";
RL
     J. Biol. Chem. 272:0-0(1997).
     EMBL; U72619; AAB61992.1; -.
DR
     HSSP; P15121; 2ACQ.
DR
DR
     InterPro; IPR001395; Aldo/ket red.
DR
     Pfam; PF00248; aldo_ket_red; 1.
                  22
FT
     NON TER
                         22
                22 AA; 2385 MW; 3E3942ABB4061CB8 CRC64;
SQ
     SEQUENCE
  Query Match
                          60.0%; Score 3; DB 4; Length 22;
  Best Local Similarity 100.0%; Pred. No. 3e+03;
                                                                 0; Gaps
  Matches
            3; Conservative 0; Mismatches
                                                 0; Indels
                                                                             0;
Qу
            2 SRL 4
              111
Db
            3 SRL 5
RESULT 21
Q96Q47
ΙD
     Q96Q47
                 PRELIMINARY;
                                   PRT;
                                           22 AA.
AC
     Q96Q47;
DT
     01-DEC-2001 (TrEMBLrel. 19, Created)
DT
     01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
DT
     01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
DE
     Mitochondrial ribosomal protein S2 (Fragment).
GN
     MRPS2.
OS
     Homo sapiens (Human).
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX
     NCBI TaxID=9606;
RN
     [1]
RΡ
     SEQUENCE FROM N.A.
RX
     MEDLINE=21429115; PubMed=11543634;
RA
     Kenmochi N., Suzuki T., Uechi T., Magoori M., Kuniba M., Higa S.,
RA
     Watanabe K., Tanaka T.;
RT
     "The human mitochondrial ribosomal protein genes: Mapping of 54 genes
     to the chromosomes and implications for human disorders.";
RT
RL
     Genomics 77:65-70(2001).
DR
     EMBL; AB051627; BAB54954.1; -.
KW
     Ribosomal protein.
     NON TER
FT
                         22
                  22
SQ
     SEQUENCE
                22 AA; 2565 MW; B8FA567A3A38F718 CRC64;
  Query Match
                          60.0%; Score 3; DB 4; Length 22;
  Best Local Similarity
                          100.0%; Pred. No. 3e+03;
            3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
QУ
            2 SRL 4
```

```
RESULT 22
09JLD6
ID
     Q9JLD6
                 PRELIMINARY;
                                   PRT;
                                            22 AA.
AC
     Q9JLD6;
DT
     01-OCT-2000 (TrEMBLrel. 15, Created)
DT
     01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
DT
     01-OCT-2000 (TrEMBLrel. 15, Last annotation update)
DΕ
     P53 tumor suppressor (Fragment).
OS
     Mesocricetus auratus (Golden hamster).
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
OC
     Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Cricetinae;
OC
     Mesocricetus.
OX
     NCBI TaxID=10036;
RN
     [1]
RΡ
     SEQUENCE FROM N.A.
RC
     TISSUE=Kidney;
RX
     MEDLINE=20150266; PubMed=10684946;
RA
     Laverdiere M., Beaudoin J., Lavigueur A.;
RT
     "Species-specific regulation of alternative splicing in the C-terminal
RT
     region of the p53 tumor suppressor gene.";
RL
     Nucleic Acids Res. 28:1489-1497(2000).
DR
     EMBL; AF190271; AAF43280.1; -.
     NON_TER
FT
                          1
                  1
     NON TER
FΤ
                  22
                         22
SO
     SEQUENCE
                22 AA; 2550 MW; F1C22CB33A0B27D1 CRC64;
                          60.0%; Score 3; DB 11; Length 22;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 3e+03;
  Matches
             3; Conservative 0; Mismatches
                                                  0; Indels
                                                                  0; Gaps
                                                                               0;
            2 SRL 4
Qу
              Db
           11 SRL 13
RESULT 23
Q84172
ΙD
                 PRELIMINARY;
                                    PRT;
                                            22 AA.
     Q84172
AC
     Q84172;
DT
     01-NOV-1996 (TrEMBLrel. 01, Created)
DT
     01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
DT
     01-NOV-1998 (TrEMBLrel. 08, Last annotation update)
DE
     Vaccinia virus ElOR homolog (Fragment).
OS
     Orf virus.
OC
     Viruses; dsDNA viruses, no RNA stage; Poxviridae; Chordopoxvirinae;
OC
     Parapoxvirus.
OX
     NCBI TaxID=10258;
RN
     [1]
RP
     SEQUENCE FROM N.A.
RC
     STRAIN=N72;
     MEDLINE=96335692; PubMed=8758000;
RX
     Mercer A.A., Green G., Sullivan J.T., Robinson A.J., Drillien R.;
RA
     "Location, DNA sequence and transcriptional analysis of the DNA
RT
     polymerase gene of orf virus.";
RT
```

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RL
     J. Gen. Virol. 77:1563-1568(1996).
     EMBL; U49979; AAB19091.1; -.
DR
FT
     NON TER
                  22
                         22
SQ
     SEQUENCE
                22 AA; 2811 MW; 7D23D05E7C4F83A4 CRC64;
  Query Match
                          60.0%; Score 3; DB 12; Length 22;
  Best Local Similarity 100.0%; Pred. No. 3e+03;
            3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
Qу
            2 SRL 4
              Db
           11 SRL 13
RESULT 24
Q9ZG66
ΙD
     Q9ZG66
                 PRELIMINARY;
                                   PRT;
                                           23 AA.
AC
     Q9ZG66;
DT
     01-MAY-1999 (TrEMBLrel. 10, Created)
     01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
DT
DT
     01-MAY-1999 (TrEMBLrel. 10, Last annotation update)
DE
     Virulence protein PGP7-D (Fragment).
OS
     Chlamydia trachomatis.
     Bacteria; Chlamydiae; Chlamydiales; Chlamydiaceae; Chlamydia.
OC
OX
     NCBI TaxID=813;
RN
     [1]
RΡ
     SEQUENCE FROM N.A.
RC
     STRAIN=L2 434B;
RA
     Wang L., Steenburg S.D., Zheng Y., Larsen S.H.;
RT
     "Gene identification of Chlamydia trachomatis by random DNA
RT
     sequencing.";
RL
     Submitted (AUG-1998) to the EMBL/GenBank/DDBJ databases.
DR
     EMBL; AF087290; AAD04067.1; -.
FT
     NON TER
                23
                         23
SO
     SEQUENCE
                23 AA; 2596 MW; 95DA4A282DC334CE CRC64;
  Query Match
                          60.0%; Score 3; DB 2; Length 23;
  Best Local Similarity 100.0%; Pred. No. 3.1e+03;
  Matches
          3; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
                                                                            0;
QУ
            2 SRL 4
Dh
            9 SRL 11
RESULT 25
086987
ID
     086987
                 PRELIMINARY;
                                  PRT:
                                          23 AA.
AC
     086987;
     01-NOV-1998 (TrEMBLrel. 08, Created)
DT
DT
     01-NOV-1998 (TrEMBLrel. 08, Last sequence update)
    01-NOV-1998 (TrEMBLrel. 08, Last annotation update)
DT
DE
    YrfE (Fragment).
GN
    YRFE.
OS
    Proteus mirabilis.
    Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
OC
OC
    Enterobacteriaceae; Proteus.
```

```
OX
    NCBI TaxID=584;
RN
     [1]
RΡ
    SEQUENCE FROM N.A.
RC
    STRAIN=U6450;
RX
    MEDLINE=98389307; PubMed=9723914;
RA
    Dufour A., Furness R.B., Hughes C.;
    "Novel genes that upregulate the Proteus mirabilis flhDC master operon
RT
RT
    controlling flagellar biogenesis and swarming.";
RL
    Mol. Microbiol. 29:741-752(1998).
DR
    EMBL; U66822; AAC28925.1; -.
    NON TER
FT
                  23
                         23
SO
    SEQUENCE
                23 AA; 2755 MW; 15866BCC4FED26DD CRC64;
                          60.0%; Score 3; DB 2; Length 23;
 Query Match
  Best Local Similarity 100.0%; Pred. No. 3.1e+03;
           3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
QУ
           2 SRL 4
              Db
           18 SRL 20
RESULT 26
09UC00
ID
    Q9UC00
                 PRELIMINARY;
                                   PRT;
                                           23 AA.
AC
    Q9UC00;
DT
    01-MAY-2000 (TrEMBLrel. 13, Created)
DT
     01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
DT
    01-MAY-2000 (TrEMBLrel. 13, Last annotation update)
DE
    Enhancement of wound HEALING process.
OS
    Homo sapiens (Human).
    Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
OC
    Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX
    NCBI TaxID=9606;
RN
     [1]
RΡ
    SEQUENCE FROM N.A.
RX
    MEDLINE=95130623; PubMed=7829572;
    Pierschbacher M.D., Polarek J.W., Craig W.S., Tschopp J.F.,
RA
RA
    Sipes N.J., Harper J.R.;
RL
    J. Cell. Biochem. 56:150-154(1994).
SQ
    SEQUENCE 23 AA; 2268 MW; CE73999CB9903891 CRC64;
  Query Match
                          60.0%; Score 3; DB 4; Length 23;
  Best Local Similarity 100.0%; Pred. No. 3.1e+03;
 Matches
          3; Conservative 0; Mismatches
                                                                 0; Gaps
                                                                             0;
                                                0; Indels
Qу
            2 SRL 4
              |\cdot|
Db
           15 SRL 17
RESULT 27
P82181
    P82181
                 PRELIMINARY:
                                   PRT:
                                            6 AA.
ID
AC
    P82181;
    01-JUN-2000 (TrEMBLrel. 14, Created)
DT
     01-JUN-2000 (TrEMBLrel. 14, Last sequence update)
DT
```

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DT
      01-MAR-2002 (TrEMBLrel. 20, Last annotation update)
 DE
      Chloroplast 50S ribosomal protein L10 beta (Fragment).
 OS
      Spinacia oleracea (Spinach).
      Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
 OC
 OC
      Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
 OC
      Caryophyllidae; Caryophyllales; Chenopodiaceae; Spinacia.
 OX
     NCBI TaxID=3562;
 RN
     [1]
RP
     SEQUENCE.
RC
     STRAIN=cv. ALWARO; TISSUE=Leaf;
RX
     MEDLINE=20435798; PubMed=10874046;
RA
     Yamaguchi K., Subramanian A.R.;
     "The plastid ribosomal proteins. Identification of all the proteins in
RT
RT
     the 50 S subunit of an organelle ribosome (chloroplast).";
RL
     J. Biol. Chem. 275:28466-28482(2000).
CC
     -!- FUNCTION: THIS PROTEIN BINDS DIRECTLY TO 23S RIBOSOMAL RNA.
CC
     -!- SUBCELLULAR LOCATION: CHLOROPLAST.
CC
     -!- TISSUE SPECIFICITY: EXPRESSED IN ALL PLANT TISSUES.
CC
     -!- MISCELLANEOUS: ON THE 2D-GEL ITS MW IS: 16.5 KDA.
CC
     -!- SIMILARITY: BELONGS TO THE L10P FAMILY OF RIBOSOMAL PROTEINS.
     InterPro; IPR001790; Ribosomal_L10.
     InterPro; IPR002363; Ribosomal L10eub.
DR
     Pfam; PF00466; Ribosomal_L10; PARTIAL.
DR
     PROSITE; PS01109; RIBOSOMAL_L10; PARTIAL.
DR
KW
     Ribosomal protein; Chloroplast; rRNA-binding.
FT
     NON TER
                   6
                          6
SQ
     SEQUENCE
                6 AA; 675 MW; 6321B415B05DB000 CRC64;
  Query Match
                          40.0%; Score 2; DB 10; Length 6;
  Best Local Similarity 100.0%; Pred. No. 8.3e+05;
  Matches
           2; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                              0;
            2 SR 3
              3 SR 4
Db
RESULT 28
P82182
ID
     P82182
                 PRELIMINARY;
                                   PRT;
                                            6 AA.
AC
     P82182;
     01-JUN-2000 (TrEMBLrel. 14, Created)
DТ
DT
     01-JUN-2000 (TrEMBLrel. 14, Last sequence update)
     01-MAR-2002 (TrEMBLrel. 20, Last annotation update)
DT
DΕ
     Chloroplast 50S ribosomal protein L10 gamma (Fragment).
OS
     Spinacia oleracea (Spinach).
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
OC
     Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
OC
     Caryophyllidae; Caryophyllales; Chenopodiaceae; Spinacia.
OX
     NCBI TaxID=3562;
RN
     [1]
RΡ
     SEQUENCE.
RC
     STRAIN=cv. ALWARO; TISSUE=Leaf;
     MEDLINE=20435798; PubMed=10874046;
RX
     Yamaguchi K., Subramanian A.R.;
RA
RT
     "The plastid ribosomal proteins. Identification of all the proteins in
     the 50 S subunit of an organelle ribosome (chloroplast).";
RT
```

```
RL
     J. Biol. Chem. 275:28466-28482(2000).
     -!- FUNCTION: THIS PROTEIN BINDS DIRECTLY TO 23S RIBOSOMAL RNA.
CC
CC
     -!- SUBCELLULAR LOCATION: CHLOROPLAST.
CC
     -!- TISSUE SPECIFICITY: EXPRESSED IN ALL PLANT TISSUES.
CC
     -!- MISCELLANEOUS: ON THE 2D-GEL ITS MW IS: 16.5 KDA.
CC
     -!- SIMILARITY: BELONGS TO THE L10P FAMILY OF RIBOSOMAL PROTEINS.
DR
     InterPro; IPR001790; Ribosomal L10.
DR
     InterPro; IPR002363; Ribosomal L10eub.
DR
     Pfam; PF00466; Ribosomal L10; PARTIAL.
DR
     PROSITE; PS01109; RIBOSOMAL L10; PARTIAL.
KW
     Ribosomal protein; Chloroplast; rRNA-binding.
FT
     NON TER
                   6
                          6
SO
     SEQUENCE 6 AA; 675 MW; 6321B415B05DB000 CRC64;
  Query Match
                          40.0%; Score 2; DB 10; Length 6;
  Best Local Similarity 100.0%; Pred. No. 8.3e+05;
  Matches
          2; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
            2 SR 3
Qу
Db
            3 SR 4
RESULT 29
050556
ID
     050556
                 PRELIMINARY;
                                          7 AA.
                                   PRT;
AC
     050556;
     01-JUN-1998 (TrEMBLrel. 06, Created)
DT
     01-JUN-1998 (TrEMBLrel. 06, Last sequence update)
DT
DT
     01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
DE
     GlyA (Fragment).
GN
     GLYA.
OS
    Actinobacillus actinomycetemcomitans (Haemophilus
OS
     actinomycetemcomitans).
OC
     Bacteria; Proteobacteria; Gammaproteobacteria; Pasteurellales;
OC
     Pasteurellaceae; Actinobacillus.
OX
     NCBI TaxID=714;
RN
RP
     SEQUENCE FROM N.A.
RC
     STRAIN=ATCC 33384;
RX
     MEDLINE=96355846; PubMed=8751884;
RA
     Kolodrubetz D., Spitznagel J. Jr., Wang B., Phillips L.H., Jacobs C.,
RA
     Kraig E.;
RT
     "cis Elements and trans factors are both important in strain-specific
RT
    regulation of the leukotoxin gene in Actinobacillus
RT
    actinomycetemcomitans.";
RL
    Infect. Immun. 64:3451-3460(1996).
DR
    EMBL; U51862; AAB88721.1; -.
FT
    NON TER
                  1
                         1
    SEQUENCE 7 AA; 832 MW; 6DCB42D767340420 CRC64;
SO
 Ouery Match
                          40.0%; Score 2; DB 2; Length 7;
 Best Local Similarity 100.0%; Pred. No. 8.3e+05;
           2; Conservative 0; Mismatches 0; Indels
 Matches
                                                                0; Gaps
                                                                            0:
Qу
           3 RL 4
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RESULT 30
P92214
ΙD
    P92214
                 PRELIMINARY;
                                   PRT;
                                            7 AA.
AC
     P92214;
DT
     01-MAY-1997 (TrEMBLrel. 03, Created)
DT
     01-MAY-1997 (TrEMBLrel. 03, Last sequence update)
     01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DT
     Ribosomal protein 11 (Fragment).
DE
GN
     RPS11.
OS
     Amblyopyrum muticum.
OG
     Chloroplast.
OC
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
     Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooideae;
OC
     Triticeae; Amblyopyrum.
     NCBI_TaxID=4595;
XO
RN
     [1]
RΡ
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RC
     STRAIN=H5572; TISSUE=Leaf;
RX
     MEDLINE=97271648; PubMed=9126564;
RA
     Petersen G., Seberg O.;
RT
     "Phylogenetic analysis of the Triticeae (Poaceae) based on rpoA
RT
     sequence data.";
     Mol. Phylogenet. Evol. 7:217-230(1997).
RL
DR
     EMBL; Z77756; CAB01346.1; -.
KW
     Chloroplast.
FΤ
     NON TER
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SQ
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            3 RL 4
Qу
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            6 RL 7
Db
RESULT 31
P92393
ΙD
     P92393
                 PRELIMINARY;
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AC
     P92393;
DT
     01-MAY-1997 (TrEMBLrel. 03, Created)
DT
     01-MAY-1997 (TrEMBLrel. 03, Last sequence update)
DT
     01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DE
     Ribosomal protein 11 (Fragment).
GN
     RPS11.
OS
     Hordeum vulgare (Barley).
OG
     Chloroplast.
OC
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
     Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooideae;
OC
     Triticeae: Hordeum.
OX
     NCBI TaxID=4513;
RN
     [1]
     SEQUENCE FROM N.A.
RP
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RC
     STRAIN=H3139; TISSUE=Leaf;
RX
     MEDLINE=97271648; PubMed=9126564:
RA
     Petersen G., Seberg O.;
     "Phylogenetic analysis of the Triticeae (Poaceae) based on rpoA
RT
RT
     sequence data.";
RL
     Mol. Phylogenet. Evol. 7:217-230(1997).
DR
     EMBL; Z77764; CAB01370.1; -.
KW
     Chloroplast.
FT
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  Best Local Similarity 100.0%; Pred. No. 8.3e+05;
            2; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
Qу
            3 RL 4
              11
Db
            6 RL 7
RESULT 32
P92403
ΙD
                 PRELIMINARY;
     P92403
                                   PRT;
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AC
     P92403;
DT
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     01-MAY-1997 (TrEMBLrel. 03, Last sequence update)
DT
     01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DT
     Ribosomal protein 11 (Fragment).
DE
GN
     RPS11.
     Lophopyrum elongatum (Tall wheatgrass) (Argopyrum elongatum).
OS
OG
     Chloroplast.
OC
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
     Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooideae;
OC.
     Triticeae; Lophopyrum.
OX
     NCBI TaxID=4588;
RN
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RР
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RC
     STRAIN=H6692; TISSUE=Leaf;
RX
     MEDLINE=97271648; PubMed=9126564;
RA
     Petersen G., Seberg O.;
     "Phylogenetic analysis of the Triticeae (Poaceae) based on rpoA
RT
RТ
     sequence data.";
     Mol. Phylogenet. Evol. 7:217-230(1997).
RL
DR
     EMBL; Z77743; CAB01307.1; -.
KW
     Chloroplast.
FT
     NON TER
SQ
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  Best Local Similarity 100.0%; Pred. No. 8.3e+05;
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QУ
           3 RL 4
              Db
           6 RL 7
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RESULT 33
 P92427
ID
                 PRELIMINARY;
     P92427
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AC
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DT
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DT
     01-MAY-1997 (TrEMBLrel. 03, Last sequence update)
     01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
\mathsf{D}\mathbf{T}
DE
     Ribosomal protein (Fragment).
GN
     RPS11.
OS
     Peridictyon sanctum.
OG
     Chloroplast.
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
     Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooideae;
OC
OC
     Triticeae; Peridictyon.
OX
     NCBI_TaxID=37683;
RN
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RΡ
     SEQUENCE FROM N.A.
RC
     STRAIN=H5575; TISSUE=Leaf;
RX
     MEDLINE=97271648; PubMed=9126564:
RA
     Petersen G., Seberg O.;
RT
     "Phylogenetic analysis of the Triticeae (Poaceae) based on rpoA
RT
     sequence data.";
     Mol. Phylogenet. Evol. 7:217-230(1997).
RL
     EMBL; Z77749; CAB01325.1; -.
DR
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KW
FT
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                                                                              0;
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Qу
              6 RL 7
RESULT 34
P92430
ID
     P92430
                 PRELIMINARY;
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                                           7 AA.
AC.
     P92430:
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DT
     01-MAY-1997 (TrEMBLrel. 03, Last sequence update)
DT
     01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DT
DE
     Ribosomal protein 11 (Fragment).
GN
     RPS11.
0S
     Aegilops tauschii (Aegilops squarrosa).
OG
     Chloroplast.
OC 
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
     Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooideae;
OC
OC
     Triticeae; Aegilops.
OX
    NCBI TaxID=37682;
RN
     [1]
RP
     SEQUENCE FROM N.A.
RC
    STRAIN=H6668; TISSUE=Leaf;
RX MEDLINE=97271648; PubMed=9126564;
RA
    Petersen G., Seberg O.;
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"Phylogenetic analysis of the Triticeae (Poaceae) based on rpoA
RT
RT
    sequence data.";
RL
    Mol. Phylogenet. Evol. 7:217-230(1997).
     EMBL; Z77758; CAB01352.1; -.
DR
KW
    Chloroplast.
FT
    NON_TER
SQ
     SEQUENCE
              7 AA; 894 MW; 6734140333277700 CRC64;
  Query Match
                         40.0%; Score 2; DB 8; Length 7;
 Best Local Similarity 100.0%; Pred. No. 8.3e+05;
           2; Conservative 0; Mismatches 0; Indels 0; Gaps
 Matches
                                                                             0;
Ov
            3 RL 4
              Н
            6 RL 7
Db
RESULT 35
P92221
ID
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                PRELIMINARY;
                                 PRT;
                                           7 AA.
AC
     P92221;
\mathsf{DT}
    01-MAY-1997 (TrEMBLrel. 03, Created)
\mathsf{D}\mathsf{T}
     01-MAY-1997 (TrEMBLrel. 03, Last sequence update)
DT
     01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DE
    Ribosomal protein 11 (Fragment).
GN
    RPS11.
OS
     Bromus inermis (Smooth brome grass).
OG
     Chloroplast.
OC
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
     Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooideae;
OC.
     Bromeae; Bromus.
OX
    NCBI TaxID=15371;
RN
     [1]
RP
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RC
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    MEDLINE=97271648; PubMed=9126564;
RA.
     Petersen G., Seberg O.;
RT
     "Phylogenetic analysis of the Triticeae (Poaceae) based on rpoA
RT
     sequence data.";
RL
    Mol. Phylogenet. Evol. 7:217-230(1997).
DR
     EMBL; Z77759; CAB01355.1; -.
KW
     Chloroplast.
FΤ
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SQ
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  Query Match
  Best Local Similarity 100.0%; Pred. No. 8.3e+05;
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            2; Conservative 0; Mismatches 0; Indels 0; Gaps
            3 RL 4
QУ
             Db
            6 RL 7
RESULT 36
P92425
ID P92425
            PRELIMINARY;
                              PRT;
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     P92425;
DT
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DT
     01-MAY-1997 (TrEMBLrel. 03, Last sequence update)
DT
     01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
DE
     Ribosomal protein 11 (Fragment).
GN
     RPS11.
     Pseudoroegneria spicata (Bluebunch wheatgrass) (Agropyron spicatum).
OS
OG
     Chloroplast.
OC
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
     Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooideae;
OC
     Triticeae; Pseudoroegneria.
OX
     NCBI TaxID=4604;
RN
     [1]
RΡ
     SEQUENCE FROM N.A.
RC
     STRAIN=H9082; TISSUE=Leaf;
RX
     MEDLINE=97271648; PubMed=9126564;
RA
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RT
     "Phylogenetic analysis of the Triticeae (Poaceae) based on rpoA
RT
     sequence data.";
RL
     Mol. Phylogenet. Evol. 7:217-230(1997).
DR
     EMBL; Z77744; CAB01310.1; -.
KW
     Chloroplast.
FT
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  Best Local Similarity 100.0%; Pred. No. 8.3e+05;
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                                                                  0; Gaps
                                                                              0;
Qу
            3 RL 4
Db
            6 RL 7
RESULT 37
P92381
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     P92381
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AC
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DT
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     01-MAY-1997 (TrEMBLrel. 03, Last sequence update)
DT
     01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DE
     Ribosomal protein 11 (Fragment).
GN
     RPS11.
OS
     Hordeum brachyantherum.
OG
     Chloroplast.
OC
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
     Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooideae;
OC
     Triticeae; Hordeum.
OX
     NCBI TaxID=52712;
RN
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RΡ
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RC
    TISSUE=Leaf;
RХ
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RA
     Petersen G., Seberg O.;
RT
     "Phylogenetic analysis of the Triticeae (Poaceae) based on rpoA
RT
     sequence data.";
RL
    Mol. Phylogenet. Evol. 7:217-230(1997).
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EMBL; Z77761; CAB01361.1; -.
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FT
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SO
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Qу
              Db
            6 RL 7
RESULT 38
P92387
ΙD
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                 PRELIMINARY;
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DT
     01-MAY-1997 (TrEMBLrel. 03, Last sequence update)
     01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DT
DE
     Ribosomal protein 11 (Fragment).
GN
     RPS11.
OS
     Henrardia persica.
     Chloroplast.
OG
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
     Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooideae;
OC.
OC
     Triticeae; Henrardia.
OX
     NCBI_TaxID=37678;
RN
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RΡ
     SEQUENCE FROM N.A.
RC
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RX
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RA
     Petersen G., Seberg O.;
     "Phylogenetic analysis of the Triticeae (Poaceae) based on rpoA
RT
RT
     sequence data.";
RL
     Mol. Phylogenet. Evol. 7:217-230(1997).
DR
     EMBL; Z77748; CAB01322.1; -.
     Chloroplast.
KW
FT
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SO
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Qу
           3 RL 4
              Db
            6 RL 7
RESULT 39
P92210
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DT
     01-MAY-1997 (TrEMBLrel. 03, Last sequence update)
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DT
     01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DE
    Ribosomal protein 11 (Fragment).
GN
    RPS11.
    Agropyron cristatum.
OS
     Chloroplast.
OG
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
     Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooideae;
OC
OC
     Triticeae; Agropyron.
OX
     NCBI TaxID=4593;
RN
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RP
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RC
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RX
RA
     Petersen G., Seberg O.;
     "Phylogenetic analysis of the Triticeae (Poaceae) based on rpoA
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RT
     sequence data.";
RL
     Mol. Phylogenet. Evol. 7:217-230(1997).
     EMBL; Z77771; CAB01391.1; -.
DR
     Chloroplast.
KW
FT
     NON TER
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SQ
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  Matches
            2; Conservative 0; Mismatches
            3 RL 4
QУ
              11
            6 RL 7
Db
RESULT 40
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DT
     01-MAY-1997 (TrEMBLrel. 03, Last sequence update)
DT
     01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DE
     Ribosomal protein 11 (Fragment).
GN
     RPS11.
OS
     Thinopyrum bessarabicum.
OG
     Chloroplast.
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
     Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooideae;
OC
OC
     Triticeae; Thinopyrum.
     NCBI TaxID=4601;
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RN
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RР
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     MEDLINE=97271648; PubMed=9126564;
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RA
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     "Phylogenetic analysis of the Triticeae (Poaceae) based on rpoA
RT
RT
     sequence data.";
     Mol. Phylogenet. Evol. 7:217-230(1997).
RL
     EMBL; Z77769; CAB01385.1; -.
DR
KW
     Chloroplast.
FT
     NON TER
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SQ SEQUENCE 7 AA; 894 MW; 6734140333277700 CRC64;
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Qу
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             - 11
Db
            6 RL 7
RESULT 41
P92218
ΙD
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AC
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DT
     01-MAY-1997 (TrEMBLrel. 03, Last sequence update)
DT
     01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
     Ribosomal protein 11 (Fragment).
DE
GN
     RPS11.
OS
     Australopyrum retrofractum.
OG
     Chloroplast.
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
OC
     Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooideae;
OC
     Triticeae; Australopyrum.
OX
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RN
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RΡ
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     MEDLINE=97271648; PubMed=9126564:
RA
     Petersen G., Seberg O.;
     "Phylogenetic analysis of the Triticeae (Poaceae) based on rpoA
RT
     sequence data.";
RT
RL
     Mol. Phylogenet. Evol. 7:217-230(1997).
     EMBL; Z77767; CAB01379.1; -.
DR
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KW
FT
    NON TER
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    SEQUENCE 7 AA; 894 MW; 6734140333277700 CRC64;
SO
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Qу
           3 RL 4
            Db
           6 RL 7
RESULT 42
P92390
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AC
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    01-MAY-1997 (TrEMBLrel. 03, Last sequence update)
DT
    01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DT
DE
    Ribosomal protein 11 (Fragment).
GN
   RPS11.
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OS
      Heteranthelium piliferum.
 OG
      Chloroplast.
 OC
      Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
      Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooideae;
 OC
 OC
      Triticeae; Heteranthelium.
 OX
     NCBI TaxID=37679;
RN
      [1]
 RP
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RC
     STRAIN=H5557; TISSUE=Leaf;
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     MEDLINE=97271648; PubMed=9126564;
     Petersen G., Seberg O.;
RA
RT
     "Phylogenetic analysis of the Triticeae (Poaceae) based on rpoA
RT
     sequence data.";
RL
     Mol. Phylogenet. Evol. 7:217-230(1997).
DR
     EMBL; Z77750; CAB01328.1; -.
KW
     Chloroplast.
FT
     NON TER
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SO
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  Best Local Similarity
                          100.0%; Pred. No. 8.3e+05;
  Matches
            2; Conservative 0; Mismatches 0; Indels 0; Gaps
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Qу
            3 RL 4
              11
Db
            6 RL 7
RESULT 43
P92372
ΙD
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                                            7 AA.
AC
     P92372;
DT
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DT
     01-MAY-1997 (TrEMBLrel. 03, Last sequence update)
DT
     01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DE
     Ribosomal protein 11 (Fragment).
GN
     RPS11.
     Haynaldia villosa.
OS
OG
     Chloroplast.
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
OC
     Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae;
0C
     PACCAD clade; Panicoideae; Andropogoneae; Haynaldia.
OX
     NCBI_TaxID=40247;
RN
     [1]
RP
     SEQUENCE FROM N.A.
RC
     STRAIN=H5561; TISSUE=Leaf;
RX
     MEDLINE=97271648; PubMed=9126564;
RA
     Petersen G., Seberg O.;
RT
     "Phylogenetic analysis of the Triticeae (Poaceae) based on rpoA
RT
     sequence data.";
RL
     Mol. Phylogenet. Evol. 7:217-230(1997).
DR
     EMBL; Z77741; CAB01301.1; -.
KW
     Chloroplast.
FT
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SO
     SEQUENCE
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  Query Match
                          40.0%; Score 2; DB 8; Length 7;
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 Qу
              Db
            6 RL 7
RESULT 44
P92442
ΙD
     P92442
                 PRELIMINARY;
                                   PRT;
                                           7 AA.
AC
     P92442;
DT
     01-MAY-1997 (TrEMBLrel. 03, Created)
DT
     01-MAY-1997 (TrEMBLrel. 03, Last sequence update)
     01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DT
DE
     Ribosomal protein 11 (Fragment).
GN
     RPS11.
OS
     Taeniatherum caput-medusae (Medusahead).
OG
     Chloroplast.
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
OC
     Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooideae;
OC
     Triticeae; Taeniatherum.
OX
     NCBI_TaxID=37687;
RN
     [1]
RΡ
     SEQUENCE FROM N.A.
RC
     STRAIN=H10254; TISSUE=Leaf;
     MEDLINE=97271648; PubMed=9126564;
RX
RA
     Petersen G., Seberg O.;
RT
     "Phylogenetic analysis of the Triticeae (Poaceae) based on rpoA
     sequence data.";
RT
RL
     Mol. Phylogenet. Evol. 7:217-230(1997).
DR
     EMBL; Z77760; CAB01358.1; -.
KW
     Chloroplast.
FT
     NON TER
                   1
     SEQUENCE 7 AA; 894 MW; 6734140333277700 CRC64;
SQ
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                          40.0%; Score 2; DB 8; Length 7;
  Best Local Similarity 100.0%; Pred. No. 8.3e+05;
  Matches
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Qу
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Dh
            6 RL 7
RESULT 45
P92226
ΙD
     P92226
                 PRELIMINARY;
                                   PRT:
                                           7 AA.
AC
     P92226;
DT
     01-MAY-1997 (TrEMBLrel. 03, Created)
\mathsf{D}\mathbf{T}
     01-MAY-1997 (TrEMBLrel. 03, Last sequence update)
DT
    01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
    Ribosomal protein 11 (Fragment).
DE
GN
    RPS11.
OS
    Crithopsis delileana.
OG
    Chloroplast.
    Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
```

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OC
     Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooideae;
OC
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OX
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RN
     [1]
RP
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RX
     MEDLINE=97271648; PubMed=9126564:
RA
     Petersen G., Seberg O.;
RT
     "Phylogenetic analysis of the Triticeae (Poaceae) based on rpoA
RT
     sequence data.";
     Mol. Phylogenet. Evol. 7:217-230(1997).
RL
DR
     EMBL; Z77751; CAB01331.1; -.
KW
     Chloroplast.
FT
     NON TER
                   1
SO
     SEQUENCE
                7 AA; 894 MW; 6734140333277700 CRC64;
  Query Match
                          40.0%; Score 2; DB 8; Length 7;
  Best Local Similarity 100.0%; Pred. No. 8.3e+05;
  Matches
            2; Conservative 0; Mismatches
                                                  0; Indels
                                                                 0; Gaps
                                                                              0;
Qу
            3 RL 4
Db
            6 RL 7
RESULT 46
P92385
ΙD
     P92385
                 PRELIMINARY;
                                   PRT;
                                            7 AA.
AC
     P92385; P92383;
     01-MAY-1997 (TrEMBLrel. 03, Created)
DT
     01-MAY-1997 (TrEMBLrel. 03, Last sequence update)
DT
DT
     01-MAR-2002 (TrEMBLrel. 20, Last annotation update)
DE
     Ribosomal protein 11 (Fragment).
GN
     RPS11.
OS
     Hordeum marinum (Seaside barley).
OG
     Chloroplast.
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
     Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooideae;
OC
OC
     Triticeae; Hordeum.
OX
     NCBI TaxID=4519;
RN
     [1]
RP
     SEQUENCE FROM N.A.
RC
     STRAIN=H299, and H801; TISSUE=Leaf;
RA
     Petersen G., Seberg O.;
RL
     Submitted (JAN-1997) to the EMBL/GenBank/DDBJ databases.
DR
     EMBL; Z77763; CAB01367.1; -.
DR
     EMBL; Z77762; CAB01364.1; -.
KW
     Chloroplast; Ribosomal protein.
FT
     NON TER
SO
     SEQUENCE
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                          40.0%; Score 2; DB 8; Length 7;
 Best Local Similarity 100.0%; Pred. No. 8.3e+05;
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Qу
            3 RL 4
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Db
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RESULT 47
P92421
ΙD
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                                            7 AA.
AC
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DT
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DT
     01-MAY-1997 (TrEMBLrel. 03, Last sequence update)
DT
     01-MAR-2002 (TrEMBLrel. 20, Last annotation update)
DΕ
     Ribosomal protein 11 (Fragment).
GN
     RPS11.
OS
     Psathyrostachys fragilis.
OG
     Chloroplast.
OC
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
     Spermatophyta; Magnoliophyta; Liliopsida; Poales; Poaceae; Pooideae;
OC
OC
     Triticeae; Psathyrostachys.
OX
     NCBI TaxID=37729;
RN
     [1]
RΡ
     SEQUENCE FROM N.A.
RC
     STRAIN=H4372, and H917; TISSUE=Leaf;
RA
     Petersen G., Seberg O.;
     Submitted (JAN-1997) to the EMBL/GenBank/DDBJ databases.
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     EMBL; Z77753; CAB01337.1; -.
DR
     EMBL; Z77752; CAB01334.1; -.
KW
     Chloroplast; Ribosomal protein.
FT
     NON TER
                   1
SO
     SEQUENCE
                7 AA; 894 MW; 6734140333277700 CRC64;
  Query Match
                          40.0%; Score 2; DB 8; Length 7;
  Best Local Similarity 100.0%; Pred. No. 8.3e+05;
            2; Conservative
                                0; Mismatches 0; Indels
                                                                  0; Gaps
                                                                               0;
Qу
            3 RL 4
Db
            6 RL 7
RESULT 48
P93233
ΙD
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                 PRELIMINARY;
                                   PRT;
                                             7 AA.
AC
DΤ
     01-MAY-1997 (TrEMBLrel. 03, Created)
DТ
     01-MAY-1997 (TrEMBLrel. 03, Last sequence update)
     01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DT
DE
     1-aminocyclopropane-1-carboxylate synthase (EC 4.4.1.14)
DE
     (Fragment).
GN
     LE-ACS1B.
     Lycopersicon esculentum (Tomato).
OS
OC.
     Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
     Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots;
OC
     Asteridae; lamiids; Solanales; Solanaceae; Solanum.
OX
     NCBI_TaxID=4081;
RN
     [1]
RP
     SEQUENCE FROM N.A.
RX
     MEDLINE=97351561; PubMed=9207843;
RA
     Oetiker J.H., Olson D.C., Shiu O.Y., Yang S.F.;
```

```
RT
      "Differential induction of seven 1-aminocyclopropane-1-carboxylate
 RT
      synthase genes by elicitor in suspension cultures of tomato
 RT
      (Lycopersicon esculentum).";
 RL
     Plant Mol. Biol. 34:275-286(1997).
 DR
     EMBL; U75692; AAC49682.1; -.
 KW
     Lyase.
 FT
     NON TER
     SEQUENCE 7 AA; 828 MW; 71B412C7377415D0 CRC64;
 SO
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  Best Local Similarity 100.0%; Pred. No. 8.3e+05;
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                                                                             0:
Qу
            2 SR 3
Db
            1 SR 2
RESULT 49
P72279
ID
     P72279
                 PRELIMINARY;
                                   PRT;
                                            8 AA.
AC
     P72279;
     01-FEB-1997 (TrEMBLrel. 02, Created)
DT
DT
     01-FEB-1997 (TrEMBLrel. 02, Last sequence update)
DT
     01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DE
     Biphenyl dioxygenase (Fragment).
GN
OS
     Rhodococcus globerulus.
OC
     Bacteria; Actinobacteria; Actinobacteridae; Actinomycetales;
OC
     Corynebacterineae; Nocardiaceae; Rhodococcus.
OX
     NCBI_TaxID=33008;
RN
     [1]
RΡ
     SEQUENCE FROM N.A.
RX
     MEDLINE=95255652; PubMed=7737502;
RA
     Asturias J.A., Diaz E., Timmis K.N.;
RT
     "Evolutionary relationship of the biphenyl dioxygenase of the gram-
     positve bacterium Rhodococcus globerulus P6 to multicomponent
RT
RT
     dioxygenases of gram-negative bacteria.";
RL
     Gene 156:11-18(1995).
     EMBL; X80041; CAA56350.1; -.
DR
KW
     Dioxygenase.
FT
     NON TER
SO
     SEQUENCE
                8 AA; 989 MW; EBD2CB1AB6D73406 CRC64;
  Query Match
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           2; Conservative 0; Mismatches 0; Indels
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                                                                             0;
Qу
            3 RL 4
Db
           2 RL 3
RESULT 50
Q934S4
ID
                 PRELIMINARY;
    Q934S4
                                   PRT;
                                           8 AA.
AC
    Q93454;
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01-DEC-2001 (TrEMBLrel. 19, Created)
DT
     01-DEC-2001 (TrEMBLrel. 19, Last sequence update) 01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
DT
\mathsf{D}\mathbf{T}
     MerD protein (Fragment).
DE
GN
     MERD.
OS
     Thiobacillus ferrooxidans.
     Bacteria; Proteobacteria; Gammaproteobacteria; Acidithiobacillus.
OC
OX
     NCBI TaxID=920;
RN
     [1]
     SEQUENCE FROM N.A.
RР
     STRAIN=G66; TRANSPOSON=Tn5037;
RC
     Kalyaeva E.S., Kholodii G.Y., Bass I.A., Gorlenko A.M., Yurieva O.V.,
RA
RA
     Nikiforov V.G.;
     "Tn5037, a Tn21-like mercury resistance transposon from Thiobacillus
RT
RT
     ferrooxidans.";
     Russ. J. Genet. 37:972-975(2001).
RL
DR
     EMBL; AJ251743; CAC69252.1; -.
FT
     NON TER
                  8
SO
     SEQUENCE 8 AA; 937 MW; ED15A2D77B5DD446 CRC64;
  Query Match
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  Best Local Similarity 100.0%; Pred. No. 8.3e+05;
  Matches 2; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
                                                                                  0;
Qу
            2 SR 3
Db
            7 SR 8
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Search completed: November 28, 2003, 14:32:06

Job time : 37 secs

GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.

OM protein - protein search, using sw model

Run on: November 28, 2003, 15:39:24; Search time 41 Seconds

(without alignments)

19.357 Million cell updates/sec

Title:

US-09-228-866-46

Perfect score:

Sequence: 1 XVLRX 5

Scoring table: OLIGO

Gapop 60.0 , Gapext 60.0

Searched:

1107863 seqs, 158726573 residues

Word size :

0

Total number of hits satisfying chosen parameters:

468892

Minimum DB seq length: 5 Maximum DB seq length: 33

Post-processing: Listing first 100 summaries

Database :

A_Geneseq 19Jun03:*

- 1: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1980.DAT:*
- /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1981.DAT:*
- 3: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1982.DAT:*
- /SIDS1/qcgdata/geneseq/geneseqp-emb1/AA1983.DAT:*
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- /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1987.DAT:* 8:
- /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1988.DAT:*
- 10: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1989.DAT:*
- 11: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1990.DAT:*
- 12: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1991.DAT:*
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- 14: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1993.DAT:*
- 15: /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1994.DAT:*
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- 17: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1996.DAT:*
- /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1997.DAT:* 18:
- /SIDS1/gcgdata/geneseq/geneseqp-embl/AA1998.DAT:* 19:
- /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1999.DAT:* 20:
- 21: /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA2000.DAT:*
- /SIDS1/gcgdata/geneseq/geneseqp-embl/AA2001.DAT:* 23:
- /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA2002.DAT:*
- /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA2003.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed,

and is derived by analysis of the total score distribution.

SUMMARIES

		&			001.1111120	
Result		Query				
No.	Score		Length	DB	ID	Description
1	3	60.0	5	8	AAP71643	Diuretic peptide d
2	3	60.0	5	16	AAR67200	Bovine glial cell
3	3	60.0	5	17	AAW09683	Cyclic pentapeptid
4	3	60.0	5	17	AAR86664	GGF II tryptic pep
5	3	60.0	5	18	AAW13413	Brain homing pepti
6	3	60.0	5	19	AAW51298	Human B-type natri
7	3	60.0	5	20	AAW97427	Shigella-like toxi
8	3	60.0	5	21	AAY80232	B-type natriuretic
9	3	60.0	5	21	AAY68290	Peptide SEQ ID NO:
10	3	60.0	5	21	AAY52944	MHC domain DR pept
11	3	60.0	5	22	AAU03880	G protein-coupled
12	3	60.0	5	22	AAU03881	G protein-coupled
13	3	60.0	5	22	AAB58705	Altered MHC determ
14	3	60.0	5	24	AAO19570	M sterilia protein
15	3	60.0	6	19	AAW51290	Human B-type natri
16	3	60.0	6	19	AAW56842	Enzyme inhibitor p
17	3	60.0	6	20	AAY55285	ATCC HB 11885 mono
18	3	60.0	6	21	AAY80220	Human B-type natri
19	3	60.0	6	21	AAY87031	Human haematopoiet
20	3	60.0	6	22	ABM00062	Savinas antibody b
21	3	60.0	6	22	ABM00074	Savinas antibody b
22	3	60.0	6	22	AAU03882	G protein-coupled
23	3	60.0	6	22	AAU03890	G protein-coupled
24	3	60.0	6	22	AAU03891	G protein-coupled
25	3	60.0	6	23	AAU97098	Abscisic acid (ABA
26	3	60.0	6	23	AAM47693	Human HARE peptide
27	3	60.0	7	19	AAW51299	Human B-type natri
28	3	60.0	7	20	AAY41942	Rheumatoid arthrit
29	3	60.0	7	20	AAY14768	P450 enzyme conser
30	3	60.0	7	20	AAY16932	Heat shock protein
31	3	60.0	7	20	AAY16976	Heat shock protein
32	3	60.0	7	21	AAY80233	B-type natriuretic
33	3	60.0	7	22	AAU72074	Melanoma antigen,
34	3	60.0	7	22	AAU72118	Melanoma antigen,
35 36	3	60.0	7	22	AAU03883	G protein-coupled
36 37	3	60.0	7	22	AAU03884	G protein-coupled
38	3 3	60.0	7	22	AAU03888	G protein-coupled
39		60.0 60.0	7	22	AAU03889	G protein-coupled
40	3 3	60.0	7	22	AAB98053	Rat endoproteinase
41	3	60.0	7	22	AAB88610	Human interleukin-
42	<i>3</i>		7	22	AAB88800	Human interleukin-
43		60.0	7	22	AAB49848	Human endostatin p
43	3 3	60.0	7	23	ABG77658	Targetting peptide
45	3	60.0 60.0	7	23	ABG77669	Targetting peptide
46	3	60.0	7	23	ABG77670	Targetting peptide
47	3	60.0	7	23	ABG77675	Targetting peptide
47	3	60.0	7	23	AA017318	A thaliana recepto
49	3	60.0	7	23	AAU79912	Cassette mutagenes
50	3	60.0	7 7	23	AAU80624	Javelin peptide #5
20	٥	00.0	/	23	AAU80668	Javelin peptide #9

E 1	2	60.0	0		
51	3	60.0	8	16	AAR71108
52	3	60.0	8	18	AAW13414
53	3	60.0	8	20	AAY40757
54	3	60.0	8	20	AAY16805
55	3	60.0	8	21	AAB30096
56	3	60.0	8	21	AAB07390
57	3	60.0	8	21	AAY69087
58	3	60.0	8	22	AAE11796
59	3	60.0	8	22	AAU03245
60	3	60.0	8	22	AAU03300
61	3	60.0	8	22	AAU03303
62	3	60.0	8	22	AAU03305
63	3	60.0	8	22	AAU03314
64	3	60.0	8	22	AAU03321
65	3	60.0	8	22	AAU03826
66	3	60.0	8	22	AAU03827
67	3	60.0	8	22	AAU03834
68	3	60.0	8	22	AAU03847
69	3	60.0	8	22	AAU03861
70	3	60.0	8	22	AAU03886
71	3	60.0	8	22	AAU03887
72	3	60.0	8	22	AAB88799
73	3	60.0	8	23	ABJ04395
74	3	60.0	8	23	ABB76371
75	3	60.0	8	23	AAE22082
76	3	60.0	8	23	AAU76990
7 7	3	60.0	8	23	AAU10707
78	3	60.0	8	24	ABP74487
79	3	60.0	8	24	ABP75102
80	3	60.0	8	24	ABP75153
81	3	60.0	9	12	AAR14600
82	3	60.0	9	15	AAY37966
83	3	60.0	9	18	AAW39634
84	3	60.0	9	18	
85	3	60.0	9	18	AAW39635
86	3	60.0	9		AAW45677
87	3	60.0	9	18 18	AAW32987
88	3	60.0	9	18	AAW13435 AAW09897
89	3	60.0	9		
90	3	60.0		20	AAY45536
91	3	60.0	9	20	AAY46145
92	3	60.0	9	20	AAY46146
93	3		9	20	AAY46147
94	3	60.0	9	20	AAY46767
95	3	60.0	9	20	AAY46772
		60.0	9	20	AAY47765
96 97	3	60.0	9	20	AAW97374
97	3	60.0	9	20	AAW99197
98	3	60.0	9	21	AAB12006
99	3	60.0	9	21	AAY96352
100	3	60.0	9	21	AAY86697

Partial peptide of Brain homing pepti S5 derivative #10, Heat shock protein Scaffold protein S Brain homing pepti Subsequence which Phage peptide #4 t Fruit fly G protei G protein-coupled Human interleukin-HUVEC cell targeti Haemophilus influe Gasterosteus acule Luteinizing hormon Brain homing pepti Human PRAME epitop Proteome analysis Proteome analysis CMV gB epitope 559 Human cERB2 oncoge Human p53 peptide Human p53 peptide c-ERB2 754 peptide HIV nef protein ep Brain homing pepti Prostate specific Immunogenic peptid HA-1 R-allele sequ Minor histocompati Brain homing pepti HLA-A3 binding pep Telomerase peptide

```
AAP71643 standard; Protein; 5 AA.
ΙD
XX
AC
     AAP71643;
XX
DT
     07-MAY-1991 (first entry)
XX
DE
     Diuretic peptide deriv.
XX
     Diuretic; natriuretic; kaliuretic; urine; sodium; potassium;
KW
KW
     excretion.
XX
OS
     synthetic.
XX
PN
     EP249169-A.
XX
PD
     16-DEC-1987.
XX
PF
     05-JUN-1987;
                  87EP-0108184.
XX
PR
     11-JUN-1986; 86DE-3619633.
XX
PΑ
     (FARH ) HOECHST AG.
XX
     Konig W, Breipohl G, Geiger R, Knolle J, Hropot M;
PΙ
XX
DR
     WPI; 1987-349887/50.
XX
     New peptide derivs. - affecting urine, sodium and/or potassium
PT
PΤ
     excretion
XX
PS
     Example 16; page 19; 35pp; German.
XX
CC
     This peptide deriv. has diuretic, natriuretic and kaliuretic
CC
     activities. It affects urine, sodium and/or potassium secretion.
CC
     Val(2) is D-Val.
     See also AAP71636, AAP71638-42 and AAP71644-55.
CC
XX
SO
     Sequence 5 AA;
  Query Match
                         60.0%; Score 3; DB 8; Length 5;
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
 Matches
          3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                            0:
Qу
            2 VLR 4
             \perp
Db
           2 VLR 4
RESULT 2
AAR67200
ΙD
    AAR67200 standard; peptide; 5 AA.
XX
AC
    AAR67200;
XX
DT
    25-MAR-2003 (updated)
    02-AUG-1995 (first entry)
DT
XX
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DE
     Bovine glial cell growth factor-2 (GGF-2) peptide fragment.
XX
KW
     Glial cell growth factor-2; GGF-2; mammalian muscle cell treatment:
KW
     skeletal; cardiac; smooth; acetylcholine receptor deficiency.
XX
OS
     Bos taurus.
XX
FΗ
     Key
                     Location/Qualifiers
FT
     Misc-difference 1
FT
                     /note= "unknown"
XX
PN
     WO9426298-A1.
XX
PD
     24-NOV-1994.
XX
PF
     06-MAY-1994;
                  94WO-US05083.
XX
PR
     06-MAY-1993; 93US-0059022.
     08-MAR-1994;
PR
                  94US-0209204.
XX
PΑ
     (CAMB-) CAMBRIDGE NEUROSCIENCE.
XX
PΙ
     Gwynne DI, Marchionni M, Sklar R;
XX
DR
     WPI; 1995-006353/01.
XX
PT
     Treating mammalian muscle diseases and disorders - by admin. of
PT
     GGF2 and other specified polypeptide(s) which bind the p185erbB2
PΤ
     receptor.
XX
PS
     Example 9; Page 154; 241pp; English.
XX
CC
     AAR67165-R67173 and AAR67199-R67201 are bovine glial cell growth
     factor-2 (GGF-2) peptide fragments. A 55-63kD polypeptide factor
CC
     known to have glial cell mitogenic activity, which includes one
CC
     of the above peptide fragments in its amino acid sequence is
CC
     claimed. The polypeptide can be used to treat a variety of
CC
CC
     mammalian skeletal, cardiac and smooth muscle diseases,
CC
     including acetylcholine receptor deficiency.
CC
     (Updated on 25-MAR-2003 to correct PN field.)
XX
SO
     Sequence
                5 AA;
  Query Match
                          60.0%; Score 3; DB 16; Length 5:
 Best Local Similarity 100.0%; Pred. No. 9.3e+05;
            3; Conservative 0; Mismatches 0; Indels 0; Gaps
 Matches
                                                                            0;
           2 VLR 4
Qу
              3 VLR 5
Dh
RESULT 3
AAW09683
ID
   AAW09683 standard; peptide; 5 AA.
XX
AC AAW09683;
```

```
XX
DT
     23-MAY-1997 (first entry)
XX
DE
     Cyclic pentapeptide having thrombolytic activity.
XX
KW
     thrombolysis; arteriosclerosis; cyclic.
XX
OS
     Synthetic.
XX
FΗ
     Kev
                      Location/Qualifiers
FT
     Modified-site
FT
                      /note= "this residue forms part of a cyclic
FT
                              peptide, being condensed with the amino acid
FT
                              at position 5. It is not an N-terminal site"
FT
     Modified-site
FT
                      /note= "this residue forms part of a cyclic
FT
                              peptide, being condensed with the amino acid
FT
                              at position 1. It is not a C-terminal site"
FT
     Misc-difference 1
FT
                      /note= "D-form residue"
     Misc-difference 3
FT
FT
                      /note= "D-form residue"
FΤ
     Misc-difference 5
FT
                     /note= "D-form residue"
XX
PN
     JP08217794-A.
XX
     27-AUG-1996.
PD
XX
PF
     15-FEB-1995;
                   95JP-0026674.
XX
PR
     15-FEB-1995;
                    95JP-0026674.
XX
PΑ
     (BIOC-) BIOCOSMOS YG.
XX
     WPI; 1996-439571/44.
DR
XX
PT
     New cyclic penta:peptide - exhibits thrombolytic and
PT
     anti-arteriosclerosis activity
XX
PS
     Disclosure; Page 8; 9pp; Japanese.
XX
CC
     The invention relates to new cyclic pentapeptides of formula
CC
     cyclo(A-B-C-D-E) in which A is Val, Leu, Phe, Lys, Arg, Glu, Gln or
CC
     Ser; B is Leu, Val, Phe, Lys, Arg, His, Glu, Gln, Ala or Ser; C is Leu,
     Val, alle, Phe, Lys, Arg, Glu, Gln, Ala or Ser; D is Phe, Val, Leu, Tyr,
CC
CC
     Lys, arg, His, Glu, Gln, Ala or Ser; and E is Arg, Val, Leu, Phe, Lys,
CC
     His, Glu, Asn, Ala or Ser. The amino acids may be in D- or L-form.
CC
     The peptides have thrombolytic activity and anti-arteriosclerotic
CC
     activity.
     The present sequence is a specific example of the new peptides.
CC
XX
SO
     Sequence
                5 AA;
  Query Match
                          60.0%; Score 3; DB 17; Length 5;
  Best Local Similarity
                          100.0%; Pred. No. 9.3e+05;
  Matches
          3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                              0;
```

```
Qу
            2 VLR 4
               Db
            1 VLR 3
RESULT 4
AAR86664
ΤD
     AAR86664 standard; peptide; 5 AA.
XX
AC
     AAR86664;
ХX
DT
     03-JUL-1996 (first entry)
XX
DE
     GGF II tryptic peptide GGF-II 06.
XX
KW
     Glial growth factor; GGF; human; hGGF2; Schwann cell; mitogenesis; GGF-I;
KW
     glial cell; therapy; peripheral nerve damage; demyelination; bovine;
KW
     glial tumour; fibroblast proliferation; wound repair; multiple sclerosis;
KW
     neurodegenerative disorder; neural regeneration; acetylcholine receptor;
KW
     GGF-II.
XX
OS
     Synthetic.
XX
FΗ
     Key
                     Location/Qualifiers
FT
     Misc-difference 1
FΤ
                     /label= Lys, Arg
XX
PN
     WO9532724-A1.
XX
PD
     07-DEC-1995.
XX
PF
     25-MAY-1995; 95WO-US06846.
XX
PR
     26-MAY-1994; 94US-0249322.
XX
PA
     (CAMB-) CAMBRIDGE NEUROSCIENCE.
PA
     (LUDW-) LUDWIG INST CANCER RES.
XX
     Chen MS, Goodearl AD, Hiles I, Marchionni M, Minghetti L;
PΙ
PΙ
     Stroobant P, Waterfield M;
XX
DR
     WPI; 1996-030329/03.
XX
PΤ
     Glial growth factors with Schwann cell mitogenic activity - for
PT
     prophylaxis or treatment of nerve disorders, e.g. Multiple Sclerosis
XX
PS
     Example 2; Fig 11; 199pp; English.
XX
CC
     AAR86659-R86677 represent fragments of bovine glial growth factor II
CC
     (GGF-II). These fragments were obtained by lysyl endopeptidase and
CC
     protease V8 digests. These sequences have Schwann cell mitogenic
    activity in the presence of foetal calf plasma. These sequences, GGF-I
CC
CC
    peptide sequences (see AAR86629-R86657), and human GGF2 (see AAR86628)
CC
    are used to stimulate mitogenesis of glial cells, for prophylaxis or
     treatment of a pathophysiological condition of the nervous system in a
CC
    mammal. Also, for identification of a receptor, for treatment of
```

```
conditions of peripheral nerve damage (e.g. demyelination/damage/loss of
CC
CC
     Schwann cells), treatment of neurodegenerative disorders in mammals, for
CC
     inducing neural regeneration, fibroblast proliferation or wound repair.
     Glial tumours can be treated by inhibiting this sequence binding to its
CC
CC
     receptor. These peptides are also able to induce synthesis of
CC
     acetylcholine receptor, and is useful in prophylaxsis or treatment of
CC
     multiple sclerosis in a patient.
XX
SO
     Sequence
                 5 AA;
  Query Match
                           60.0%; Score 3; DB 17; Length 5;
  Best Local Similarity
                          100.0%; Pred. No. 9.3e+05;
  Matches
            3; Conservative
                                 0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                               0;
Qу
            2 VLR 4
Db
            3 VLR 5
RESULT 5
AAW13413
ΙD
     AAW13413 standard; Peptide; 5 AA.
XX
AC
     AAW13413;
XX
DT
     15-JAN-1998 (first entry)
XX
     Brain homing peptide generic sequence.
DE
XX
     Brain homing peptide; in vivo panning; screening; phage display;
KW
KW
     drug delivery.
XX
OS
     Synthetic.
XX
FΗ
     Key
                     Location/Qualifiers
FT
     Misc-difference 1
FT
                     /note= "Xaa at position 1 is absent or is about
FT
                             1-10 independently selected amino acids"
FT
     Misc-difference 5
FT
                     /note= "Xaa at position 5 is about 1-20
FT
                             idenpendently selected amino acids"
XX
PN
     WO9710507-A1.
XX
PD
     20-MAR-1997.
XX
PF
     10-SEP-1996;
                    96WO-US14600.
XX
PR
     11-SEP-1995;
                    95US-0526710.
PR
     11-SEP-1995:
                    95US-0526708.
XX
PΑ
     (LJOL-) LA JOLLA CANCER RES FOUND.
XX
     Pasqualini R, Ruoslahti E;
PΙ
XX
DR
    WPI; 1997-202359/18.
XX
```

```
Obtaining compound that homes to selected organ or tissue - by in
     vivo panning method, specifically to identify brain, kidney,
 PT
PT
     angiogenic vasculature or tumour tissue homing peptide(s)
XX
PS
     Claim 12; Page 67; 75pp; English.
XX
CC
     This synthetic generic peptide is a claimed example of a brain-
     homing peptide that was identified using a novel method for
CC
CC
     obtaining molecules that home to a selected organ or tissue.
CC
     in vivo panning method typically involves administering a phage
CC
     display library to a subject, and identifying expressed peptides
CC
     which home to the desired organ or tissue, e.g. brain, kidney,
     angiogenic vascular or tumour tissue. The isolated peptides (see
CC
     AAW13412-52, AAW11181-86) can be used to target e.g. drugs, toxins or
CC
     labels to the selected organ/tissue (claimed) or to identify and/or
CC
CC
     isolate target molecules (claimed). The peptides can be directly
CC
     identified in vivo, as compared to prior art in vitro screening
     methods, which require further examination to see if they maintain
CC
CC
     specificity in vivo.
XX
SQ
     Sequence
                5 AA;
  Query Match
                          60.0%; Score 3; DB 18; Length 5;
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
            3; Conservative 0; Mismatches
                                                 0; Indels
                                                                 0; Gaps
                                                                              0;
QУ
            2 VLR 4
              111
Dh
            2 VLR 4
RESULT 6
AAW51298
     AAW51298 standard; peptide; 5 AA.
XX
AC
     AAW51298;
XX
DT
     15-SEP-1998 (first entry)
XX
DE
     Human B-type natriuretic peptide variant, C-terminal sequence.
XX
     B-type natriuretic peptide; clearance receptor; electrolyte balance;
KW
KW
     diuretic; vasodilator; circulation; natriuresis; diuresis; hNPR-C;
KW
     cyclic guanosine monophosphate; cGMP; second messenger; variant.
XX
OS
     Synthetic.
XX
FH
                     Location/Qualifiers
FT
     Misc-difference 1
FΤ
                     /label= Asn, Lys
FΤ
     Misc-difference 5
FT
                     /label= Arg, Lys
ХX
PN
     WO9817690-A1.
XX
PD
     30-APR-1998.
XX
```

PT

```
PF
     09-OCT-1997;
                  97WO-US18384.
XX
PR
     22-OCT-1996; 96US-0731880.
XX
     (GETH ) GENENTECH INC.
PA
XX
PΙ
    Lowe DG, Schoenfeld JR;
XX
DR
    WPI; 1998-261429/23.
XX
PT
     Variants of brain natriuretic peptide with reduced affinity for
PΤ
     clearance receptor - for treating disorders of electrolyte balance
     and as diuretics and vasodilators, have increased circulation time
PT
PT
     and in vivo activity
XX
PS
     Disclosure; Page 8; 55pp; English.
XX
CC
     The invention relates to variants of brain natriuretic peptide (BNP)
CC
     with reduced affinity for the human clearance receptor (hNPR-C) relative
CC
     to wild-type BNP. The variants are used: (a) to treat or prevent
CC
     disorders of electrolyte balance, or (b) to induce natriuresis, diuresis
CC
     or vasodilation. Typical applications are in congestive heart failure,
CC
     arrhythmia, hypertension, nephrotic syndrome, pre-eclampsia, premenstrual
CC
     syndrome, hepatic cirrhosis, pulmonary disease and renal failure
CC
     (associated with inefficient renal perfusion or reduced glomerular
CC
     filtration rate). The variants are also useful as intermediates and as
CC
     modulators of other compounds with similar activities. Although the
CC
     variants have reduced affinity for NPR-C, they have at least equal
CC
     affinity for the A receptor (NPR-A) and ability to stimulate cyclic
CC
     guanosine monophosphate (cGMP), second messenger, production. The
CC
     variants should persist for longer in the circulation and thus have
CC
     greater in vivo activity. The present sequence represents the
CC
     C-terminal sequence of a BNP variant.
XX
SO
     Sequence
                5 AA;
  Query Match
                          60.0%; Score 3; DB 19; Length 5;
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
           3; Conservative 0; Mismatches
                                                0; Indels 0; Gaps
                                                                             0:
Qу
            2 VLR 4
Db
            2 VLR 4
RESULT 7
AAW97427
ID
    AAW97427 standard; peptide; 5 AA.
XX
AC
    AAW97427;
XX
DT
     19-MAY-1999 (first entry)
XX
DΕ
     Shigella-like toxin epitope from Escherichia coli 0157:H7.
XX
KW
     Shigella-like toxin; SLT; Escherichia coli 0157:H7;
KW
     epitope; vaccine.
```

```
XX
     Escherichia coli.
OS
XX
PN
     WO9905169-A1.
XX
     04-FEB-1999.
PD
XX
                    98WO-GB02156.
ΡF
     17-JUL-1998;
XX
     21-JUL-1997;
                    97GB-0015177.
PR
XX
     (NEUT-) NEUTEC PHARMA PLC.
PΑ
XX
PΙ
     Burnie JP, Matthews RC;
XX
DR
     WPI; 1999-142851/12.
XX
     New epitopes of shigella-like toxin (SLT) - useful in the diagnosis
PT
     and treatment of pathogens expressing SLTs, particularly E. coli
PT
PT
     0157:H7
XX
PS
     Claim 1; Page 21; 29pp; English.
XX
CC
     AAW97424-30 represents epitope of shigella-like toxin (SLT) from
     Escherichia coli 0157:H7. The epitopes and their binding agents
CC
     are used in the diagnosis and treatment of animals or humans.
CC
CC
     The epitopes can be used as an immunogen or vaccine.
XX
SQ
     Sequence
                5 AA;
  Ouery Match
                          60.0%; Score 3; DB 20; Length 5;
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
            3; Conservative 0; Mismatches 0; Indels
  Matches
                                                                  0; Gaps
                                                                              0;
Qу
            2 VLR 4
              3 VLR 5
Db
RESULT 8
AAY80232
ΙD
     AAY80232 standard; peptide; 5 AA.
XX
AC
     AAY80232;
XX
DT
     25-MAY-2000 (first entry)
XX
     B-type natriuretic peptide variant C-terminal peptide SEQ ID NO:41.
DE
XX
KW
     Human; B-type natriuretic peptide; BNP; clearance receptor; diuretic;
ΚW
     water imbalance; electrolyte imbalance; natriuretic peptide receptor;
KW
     natriuresis; diuresis; vasodilation; hypotensive; cardiant; hepatotropic;
KW
     nephrotropic; vasorelaxant; hypertension; congestive heart failure;
KW
     nephrotic syndrome; hepatic cirrhosis; pulmonary disease; renal failure.
XX
OS
     Mammalia.
XX
```

```
FH
                     Location/Qualifiers
     Misc-difference 1
FT
FT
                     /label = Asn, Lys
FT
     Misc-difference 5
FT
                     /label= Arg, Lys
XX
     US6028055-A.
PN
XX
PD
     22-FEB-2000.
XX
PF
     21-OCT-1997;
                  97US-0954915.
XX
PR
     22-OCT-1996:
                  96US-0028854.
XX
PA
     (GETH ) GENENTECH INC.
XX
PΙ
     Schoenfeld JR, Lowe DG;
XX
DR
     WPI; 2000-194846/17.
XX
PT
     B-type natriuretic peptide (BNP) variant (I) having a decreased binding
PT
     affinity for the human clearance receptor, useful for treating
PT
     natriuresis, diuresis or vasodilation -
XX
PS
     Disclosure; Column 8; 33pp; English.
XX
CC
     The present invention describes a B-type natriuretic peptide (BNP)
CC
     variant (I) having a decreased binding affinity for the human clearance
     receptor compared to human wild-type BNP. The present invention also
CC
CC
     describes a method for treating a disorder of electrolyte balance
CC
     including natriuresis, diuresis or vasodilation comprising administering
CC
     a composition comprising (I). (I) has hypotensive, cardiant,
CC
     hepatotropic, nephrotropic, natriuretic, diuretic and vasorelaxant
CC
     activities. (I) can be used for the treatment or prophylaxis of
CC
     conditions associated with water or electrolyte imbalance and
CC
     hypertension, such as congestive heart failure (CHF), nephrotic syndrome
CC
     and hepatic cirrhosis, pulmonary disease, and renal failure due to
     ineffective renal perfusion or reduced glomerular filtration rate. (I)
CC
CC
     can also useful for treating natriuresis, diuresis or vasodilation.
CC
     The present sequence represents an C-terminal peptide from a BNP
CC
     variant given in the present invention.
XX
SQ
     Sequence 5 AA;
  Query Match
                          60.0%; Score 3; DB 21; Length 5;
  Best Local Similarity
                          100.0%; Pred. No. 9.3e+05;
  Matches
            3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                              0;
Qу
            2 VLR 4
              Db
            2 VLR 4
RESULT 9
AAY68290
ID
     AAY68290 standard; Peptide; 5 AA.
```

XX

```
AC
     AAY68290;
XX
DT
     13-APR-2000 (first entry)
XX
     Peptide SEQ ID NO:122.
DE
XX
     MHC class I; major histocompatibility complex; microglobulin; antigen;
KW
     immune response; immunisation; AIDS; multiple sclerosis; toxic shock;
KW
     cancer; lupus erythematosus; snake bite; cytostatic; antiviral;
KW
     immunomodulatory; dermatological; immunosuppressive; antiinflammatory;
KW
KW
     neuroprotective.
XX
     Unidentified.
OS
XX
PN
     US6011146-A.
XX
     04-JAN-2000.
PD
XX
ΡF
     07-JUN-1995;
                   95US-0481985.
XX
PR
     15-NOV-1991; 91US-0792473.
PR
     05-DEC-1991; 91US-0801818.
XX
PA
     (INSP ) INST PASTEUR.
     (INRM ) INST NAT SANTE & RECH MEDICALE.
PA
XX
     Kourilsky P, Mottez E, Abastado J;
PΙ
XX
DR
     WPI; 2000-125951/11.
XX
PТ
     New recombinant DNA encoding covalently linked form of major
     histocompatibility complex Class I determinant, used for immune system
PT
PT
     stimulation, e.g. for treating cancer
XX
     Disclosure; Column 149; 88pp; English.
PS
XX
CC
     The present invention describes a recombinant DNA molecule (I)
     containing a sequence (Ia) that encodes an altered MHC (major
CC
CC
     histocompatibility complex ) Class I determinant (II) comprises a
CC
     polypeptide with alpha1, alpha2, alpha3 and beta2-microglobulin
CC
     domains, in which alpha3 and beta2 are covalently linked, thorough C-
CC
     and N-termini respectively, via a nucleotide spacer sequence encoding a
CC
     polypeptide. (II) includes an antigen-binding site and when (II) and
CC
     the antigen are associated they are recognized by a mammalian T cell
CC
     receptor (TCR). (I) are used to produce (II) which are used to study
CC
     functional interactions between the various MHC domains. They can also
CC
     be used to modulate (in vivo or in vitro) the immune system by inducing
CC
     an effector response (cytotoxicity, antibody synthesis, phagocytosis)
     of immune system cells, typically for treating, or immunising against;
CC
     cancer, acquired immune deficiency syndrome, lupus erythematosus,
CC
CC
     multiple sclerosis, toxic shock and snake bite, but also for selective
CC
     destruction of autoreactive cells, diagnostically to assay T cell
     receptors and to raise specific antibodies (useful for diagnosis,
CC
```

therapy, studying MHC-associated cellular processes and for affinity purification). AAZ57558 and AAY68186 to AAY68316 are sequences used in

the exemplification of the present invention.

CC

CC

XX

```
SO
     Sequence
                5 AA;
                          60.0%; Score 3; DB 21; Length 5;
  Query Match
                          100.0%; Pred. No. 9.3e+05;
  Best Local Similarity
            3; Conservative 0; Mismatches
  Matches
                                                 0; Indels
                                                                 0; Gaps
                                                                              0;
            2 VLR 4
Qу
              111
Db
            1 VLR 3
RESULT 10
AAY52944
    AAY52944 standard; Peptide; 5 AA.
ID
XX
AC
     AAY52944;
XX
DT
     14-FEB-2000 (first entry)
XX
DE
     MHC domain DR peptide SEQ ID NO:122.
XX
     Major histocompatibility complex; MHC class I; MHC class II; antigen;
KW
KW
     immune response; diagnosis; antibody; immunisation; autoimmune disease;
KW
     acquired immune deficiency syndrome; AIDS; cytostatic; dermatological;
KW
     anti-inflammatory; neuroprotective; immunosuppressive; antithyroid;
     vaccine; lupus erythematosus; multiple sclerosis; thyroiditis;
KW
KW
     toxic shock; tumour; snakebite.
XX
OS
     Mammalia.
XX
ΡN
     US5976551-A.
XX
PD
     02-NOV-1999.
XX
PF
     07-JUN-1995;
                  95US-0484905.
XX
PR
     05-DEC-1991;
                  91US-0801818.
                    91US-0792473.
PR
     15-NOV-1991;
XX
PΑ
     (INSP ) INST PASTEUR.
     (INRM ) INSERM INST NAT SANTE & RECH MEDICALE.
PΑ
XX
PΙ
     Kourilsky P, Mottez E, Abastado J;
XX
DR
     WPI; 2000-037081/03.
XX
PT
     Composition containing an antigen and altered major histocompatibility
PT
     Class II determinant, used to immunize against autoimmune diseases,
PT
     e.g. acquired immune deficiency syndrome
XX
PS
     Disclosure; Column 173; 96pp; English.
XX
CC
     The present invention describes a composition capable of eliciting
CC
     anti-major histocompatibility (MHC) antibodies. The composition
CC
     comprises an antigen associated with an altered MHC Class II determinant
CC
     (I) comprising alphal, alpha2, betal and beta2 polypeptide domains
     encoded by a mammalian MHC Class II locus covalently linked to form a
CC
```

```
CC
     polypeptide (I) containing beta2, alpha2, alpha1 and beta1 domains in
CC
     sequence. The resulting Antigen-MHC complex is recognizable by the T cell
CC
     receptor. The compositions are used for immunisation against, or
CC
     treatment of, a wide range of autoimmune diseases, e.g. acquired immune
CC
     deficiency syndrome (AIDS), lupus erythematosus, multiple sclerosis,
CC
     thyroiditis, toxic shock, tumour and snakebite, depending on the nature
CC
     of antigen. (I) is also used to analyse functional interactions between
CC
     the various domains and for targeting lymphocyte receptors. Antibodies
     against (I) are produced by usual methods of immunisation or cell fusion,
CC
CC
     and may be humanised by standard methods. These antibodies are useful for
CC
     diagnosis (detection or purification of MHC gene products), therapy
     (neutralising MHC on cell surfaces) and in the study of MHC and cellular
CC
CC
     processes. AAZ33240 to AAZ33242 and AAY52840 to AAY52970 represent
CC
     sequences used in the exemplification of the present invention.
XX
SQ
     Sequence
                5 AA;
  Query Match
                          60.0%; Score 3; DB 21; Length 5;
                          100.0%; Pred. No. 9.3e+05;
 Best Local Similarity
 Matches
            3; Conservative 0; Mismatches 0; Indels
Qу
            2 VLR 4
              111
Db
            1 VLR 3
RESULT 11
AAU03880
ΙD
     AAU03880 standard; Peptide; 5 AA.
XX
AC
     AAU03880;
XX
DT
    12-SEP-2001 (first entry)
XX
DE
     G protein-coupled receptor-like (GPCR-like) receptor binding peptide #50.
XX
KW
     G protein-coupled receptor-like receptor; GPCR-like receptor; helminth;
KW
     endoparasite; ectoparasite; invertebrate; insect; neurological disorder;
KW
     neuromuscular disorder; human; nematode; lobster; locust; mollusc; leech;
KW
     fruitfly.
XX
OS
     Synthetic.
XX
PN
     WO200138533-A2.
XX
PD
     31-MAY-2001.
XX
PF
     24-NOV-2000; 2000WO-US32225.
XX
     24-NOV-1999;
PR
                    99US-0167523.
XX
PA
     (PHAA ) PHARMACIA & UPJOHN.
XX
ΡI
     Lowery DE, Geary TG, Kubiak TM, Larsen MJ;
XX
DR
     WPI; 2001-343952/36.
XX
```

```
PT
     Using G-protein-coupled receptor (GPCR)-like receptors to identify
PT
     candidate compounds for the treatment and prevention of invertebrate
PΤ
     parasites, especially helminths and insects -
XX
PS
     Claim 14; Page 56; 219pp; English.
XX
CC
     The sequence represents a G protein-coupled receptor-like (GPCR-like)
CC
     receptor protein. GPCR-like receptors and their associated nucleic acids
CC
     may be used to identify candidate compounds for their ability to modulate
CC
     the activity of GPCRs. The sequences therefore are useful for treating
     and preventing infection by endoparasitic and ectoparasitic invertebrate
CC
     parasites, especially helminths and insects, and particularly ailments
CC
     related to aberrant neurological and neuromuscular function.
CC
XX
SO
     Sequence
                5 AA;
  Query Match
                          60.0%; Score 3; DB 22; Length 5;
  Best Local Similarity
                          100.0%; Pred. No. 9.3e+05;
            3; Conservative 0; Mismatches
                                                  0; Indels
                                                                  0; Gaps
                                                                              0;
Qу
            2 VLR 4
Db
            2 VLR 4
RESULT 12
AAU03881
ID
     AAU03881 standard; Peptide; 5 AA.
XX
AC
     AAU03881;
XX
DT
     12-SEP-2001 (first entry)
XX
DE
     G protein-coupled receptor-like (GPCR-like) receptor binding peptide #51.
XX
     G protein-coupled receptor-like receptor; GPCR-like receptor; helminth;
KW
     endoparasite; ectoparasite; invertebrate; insect; neurological disorder;
KW
KW
     neuromuscular disorder; human; nematode; lobster; locust; mollusc; leech;
KW
     fruitfly.
XX
OS
     Synthetic.
XX
PN
     WO200138533-A2.
XX
PD
     31-MAY-2001.
XX
PF
     24-NOV-2000; 2000WO-US32225.
XX
PR
     24-NOV-1999;
                   99US-0167523.
XX
PΑ
     (PHAA ) PHARMACIA & UPJOHN.
XX
PΙ
    Lowery DE, Geary TG, Kubiak TM, Larsen MJ;
ХΧ
DR
    WPI; 2001-343952/36.
XX
    Using G-protein-coupled receptor (GPCR)-like receptors to identify
PТ
```

```
candidate compounds for the treatment and prevention of invertebrate
PΤ
     parasites, especially helminths and insects -
PT
XX
PS
     Claim 14; Page 56; 219pp; English.
XX
CC
     The sequence represents a G protein-coupled receptor-like (GPCR-like)
     receptor protein. GPCR-like receptors and their associated nucleic acids
CC
     may be used to identify candidate compounds for their ability to modulate
CC
     the activity of GPCRs. The sequences therefore are useful for treating
CC
     and preventing infection by endoparasitic and ectoparasitic invertebrate
CC
CC
     parasites, especially helminths and insects, and particularly ailments
CC
     related to aberrant neurological and neuromuscular function.
XX
SO
     Sequence
                5 AA;
  Query Match
                          60.0%; Score 3; DB 22; Length 5;
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
            3; Conservative 0; Mismatches
                                                  0; Indels
  Matches
                                                                  0; Gaps
                                                                              0:
Qу
            2 VLR 4
              \perp
Db
            2 VLR 4
RESULT 13
AAB58705
ΙD
     AAB58705 standard; peptide; 5 AA.
XX
AC
     AAB58705;
XX
DT
     13-MAR-2001 (first entry)
XX
DE
     Altered MHC determinant peptide #2.
XX
KW
     Major histocompatibility complex; MHC class I; immune; snake bite;
KW
     T cell mediated autoimmune disease; AIDS; lupus erythematosus;
KW
     toxic shock.
XX
OS
     Unidentified.
XX
PN
     US6153408-A.
XX
PD
     28-NOV-2000.
XX
ΡF
     09-JAN-1995;
                  95US-0370476.
XX
PR
     15-NOV-1991;
                    91US-0792473.
PR
     07-SEP-1993;
                  93US-0117575.
PR
     05-DEC-1991;
                   91US-0801818.
     07-JUN-1993;
PR
                   93US-0072787.
XX
PA
     (INSP ) INST PASTEUR.
PA
     (INRM ) INST NAT SANTE & RECH MEDICAL.
XX
PΙ
     Abastado J, Kourilsky P, Casrouge A, Ojcius D, Lone Y, Mottez E;
XX
     WPI; 2001-060089/07.
DR
```

```
XX
PΤ
     New altered major histocompatibility complex (MHC) class I determinant
PT
     useful for eliciting an immune response and/or for immunizing against
PT
     or treating diseases, for example, multiple sclerosis, AIDS, toxic
PT
     shock or snake bite -
XX
     Disclosure; Column 163; 105pp; English.
PS
XX
CC
     The present invention relates to a major histocompatibility complex
CC
     (MHC) class I determinant, which has alpha 1 alpha 2 alpha 3 and
CC
     beta2-microglobulin polypeptide domains encoded by a mammalian MHC
CC
     class I locus. The MHC class I determinants are useful for activating
CC
     the immune system and presenting antigens to the immune system to
CC
     elicit an antigenic response. The MHC class I determinants are also
CC
     useful for treating diseases, e.g. T cell mediated autoimmune disease,
CC
    AIDS, lupus erythematosus, toxic shock or snake bite. The altered MHC
CÇ
     class I determinants and compositions containing antigens bound to
CC
     the determinants are useful in diagnostic applications, e.g. altered
CC
     determinants may be used to target lymphocyte receptors and the
CC
     resulting bound determinant can be assayed.
XX
SQ
     Sequence
                5 AA;
  Query Match
                          60.0%; Score 3; DB 22; Length 5;
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
  Matches
           3; Conservative 0; Mismatches
                                                 0; Indels
                                                                 0; Gaps
                                                                              0;
            2 VLR 4
Qу
              Db
            1 VLR 3
RESULT 14
AAO19570
ID
     AA019570 standard; Peptide; 5 AA.
XX
AC
     AA019570;
XX
DT
     28-JAN-2003 (first entry)
XX
DE
     M sterilia protein fragment #5.
XX
KW
     Substance PF1022; biosynthesis; transgenic; chorismic acid; anthelmintic;
KW
     phenylalanine; p-aminophenylpyruvic acid; pharmaceutical;
KW
     veterinary drug.
XX
OS
    Mycelia sterilia.
XX
PN
     WO200277244-A1.
XX
PD
     03-OCT-2002.
XX
PF
     22-MAR-2002; 2002WO-JP02782.
XX
PR
     22-MAR-2001; 2001JP-0082227.
XX
PA
     (MEIJ ) MEIJI SEIKA KAISHA LTD.
```

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XX
     Yanai K, Sumida N, Watanabe M, Moriya T, Murakami T;
PΙ
XX
DR
     WPI; 2003-018934/01.
XX
     Novel biosynthesis gene-transferred transformants for producing PF1022
PT
PT
     substance derivatives by fermentation, as pharmaceuticals or veterinary
PT
     drugs with anthelmintic activity -
XX
PS
     Example 13; Page 105; 116pp; Japanese.
XX
CC
     The present invention relates to transformants capable of producing
     PF1022 substance derivatives. These were obtained by transferring a gene
CC
CC
     participating in the biosynthesis pathway from chorismic acid to
CC
     p-aminophenylpyruvic acid (biosynthesis gene) into a
CC
     phenylalanine-requiring host derived from an organism producing the
CC
     PF1022 substance. The transformants are producing PF1022 substance
CC
     derivatives by fermentation, for use as pharmaceuticals or veterinary
CC
     drugs. The present sequence is a fragment of a Mycelia sterilia protein
CC
     described in the exemplification of the invention.
XX
SQ
     Sequence
                5 AA;
  Query Match
                          60.0%; Score 3; DB 24; Length 5;
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
  Matches
            3; Conservative 0; Mismatches
                                                 0; Indels
                                                                 0; Gaps
                                                                              0;
Qу
            2 VLR 4
              111
            3 VLR 5
Db
RESULT 15
AAW51290
     AAW51290 standard; peptide; 6 AA.
ΙD
XX
AC
     AAW51290;
XX
DT
     15-SEP-1998 (first entry)
XX
DE
     Human B-type natriuretic peptide variant partial sequence.
XX
KW
     B-type natriuretic peptide; clearance receptor; electrolyte balance;
KW
     diuretic; vasodilator; circulation; natriuresis; diuresis; hNPR-C;
KW
     cyclic guanosine monophosphate; cGMP; second messenger; variant.
XX
OS
     Synthetic.
XX
     WO9817690-A1.
PN
XX
PD
     30-APR-1998.
XX
ΡF
     09-OCT-1997;
                    97WO-US18384.
XX
PR
     22-OCT-1996;
                    96US-0731880.
XX
     (GETH ) GENENTECH INC.
PA
```

```
XX
ΡI
     Lowe DG, Schoenfeld JR;
XX
DR
     WPI; 1998-261429/23.
XX
     Variants of brain natriuretic peptide with reduced affinity for
PT
     clearance receptor - for treating disorders of electrolyte balance
PT
     and as diuretics and vasodilators, have increased circulation time
PT
PΤ
     and in vivo activity
XX
PS
     Claim 7; Page 46; 55pp; English.
XX
CC
     The invention relates to variants of brain natriuretic peptide (BNP)
CC
     with reduced affinity for the human clearance receptor (hNPR-C) relative
     to wild-type BNP. The variants are used: (a) to treat or prevent
CC
CC
     disorders of electrolyte balance, or (b) to induce natriuresis, diuresis
CC
     or vasodilation. Typical applications are in congestive heart failure,
CC
     arrhythmia, hypertension, nephrotic syndrome, pre-eclampsia, premenstrual
CC
     syndrome, hepatic cirrhosis, pulmonary disease and renal failure
CC
     (associated with inefficient renal perfusion or reduced glomerular
CC
     filtration rate). The variants are also useful as intermediates and as
CC
     modulators of other compounds with similar activities. Although the
CC
     variants have reduced affinity for NPR-C, they have at least equal
     affinity for the A receptor (NPR-A) and ability to stimulate cyclic
CC
CC
     guanosine monophosphate (cGMP), second messenger, production. The
CC
     variants should persist for longer in the circulation and thus have
CC
     greater in vivo activity. The present sequence represents a BNP
CC
     variant partial sequence.
XX
     Sequence
                6 AA;
SQ
  Query Match
                          60.0%; Score 3; DB 19; Length 6;
  Best Local Similarity
                          100.0%; Pred. No. 9.3e+05;
             3; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
                                                                              0;
            2 VLR 4
Qу
              111
            2 VLR 4
Db
RESULT 16
AAW56842
ΙD
     AAW56842 standard; peptide; 6 AA.
XX
AC
     AAW56842;
XX
DT
     28-JUL-1998 (first entry)
XX
DΕ
     Enzyme inhibitor peptide SEQ ID NO:43.
XX
KW
     Enzyme inhibitor; t-PA; u-PA; chymotrypsin; serine protease; active;
KW
     latent; substrate subtraction phage display peptide library;
KW
     identification; kinase; phosphatase; serpin.
XX
OS
     Homo sapiens.
XX
     WO9747314-A1.
PΝ
```

```
XX
     18-DEC-1997.
PD
XX
PF
     10-JUN-1997;
                   97WO-US09760.
XX
                    96US-0019495.
PR
     10-JUN-1996;
XX
PΑ
     (SCRI ) SCRIPPS RES INST.
XX
PΙ
    Ke S, Madison EL;
XX
DR
    WPI; 1998-062746/06.
XX
PT
    Substrate subtraction phage display peptide libraries - used to
     distinguish between active and latent forms of enzyme, e.g. serine
PT
PΤ
    protease
XX
PS
    Claim 25; Page 54; 138pp; English.
XX
CC
     The present sequence represents an enzyme inhibitor peptide used in
CC
     the method of the invention to distinguish between t-PA and u-PA. The
CC
     present invention describes a substrate subtraction library for the
CC
     identification of peptide substrates selective between a first enzyme
     (E1) and a second enzyme (E2), comprising a collection different
CC
CC
    peptides, substantially lacking peptides that are effective substrates
CC
     for El. Also described are: (1) a method (M1) for identifying peptide
     substrates selective between a first enzyme (E1) and a second enzyme
CC
CC
     (E2); (2) a compound comprising the amino acid sequence of a peptide
CC
     identified by M1; (3) a polypeptide for use as an enzyme inhibitor
CC
     comprising one of 237 amino acid sequences (see AAW56801 to AAW56947,
CC
     and AAW56949 to AAW57038); (4) a recombinant DNA vector comprising DNA
CC
     (I) encoding a protease inhibitor including the sequence identified by
CC
     the M1; (5) a prokaryotic or eukaryotic cell containing the vector of
CC
     (4); (6) an antibody (Ab) immunoreactive with at least one of the
CC
     peptides identified by M1; and (7) a diagnostic assay for distinguishing
CC
    between active and latent forms of protease inhibitors, that uses (Ab).
CC
    The library and method are used for distinguishing between active and
CC
    latent forms of enzyme inhibitors, e.g. proteases, kinases and
CC
    phosphatases. (Ab) are used for affinity purification of recombinant
CC
    peptides and in the identification of naturally occurring protease
CC
     inhibitors. Enzyme- inhibiting peptides identified can be used to treat a
CC
     serpin deficiency or a disorder of serine proteases.
XX
SO
     Sequence
                6 AA;
                          60.0%; Score 3; DB 19; Length 6;
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
 Matches
            3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
Qу
            2 VLR 4
              111
Db
            2 VLR 4
```

RESULT 17 AAY55285

ID AAY55285 standard; peptide; 6 AA.

```
XX
AC
     AAY55285;
XX
DT
     07-JAN-2000 (first entry)
XX
DE
     ATCC HB 11885 monoclonal antibody 9079 releasing peptide SEQ ID NO:179.
XX
KW
     Antibody releasing peptide; CD34; hybridoma; binding; antigen;
KW
     cell surface antigen; identification; haematopoietic stem cell;
KW
     tumour; cancer; immune system; therapy; displacement.
XX
OS
     Synthetic.
OS
     Homo sapiens.
XX
     US5968753-A.
PN
XX
PD
     19-OCT-1999.
XX
ΡF
     07-JUN-1995;
                   95US-0482228.
XX
PR
     14-JUN-1994;
                  94US-0259427.
XX
PΑ
     (NEXE-) NEXELL THERAPEUTICS INC.
XX
PΙ
     Guillermo R, Helgerson SL, Deans RJ, Tseng-Law J, Kobori JA;
PΙ
     Al-Abdaly FA;
XX
DR
     WPI; 1999-590399/50.
XX
PT
     Short peptides useful for displacing antibodies from cell surface
PT
     antigens. -
XX
PS
     Example 9; Column 33; 81pp; English.
XX
CC
     The present invention describes peptides of 4-17 amino acids which
CC
     displace either the anti-CD34 monoclonal antibody designated 561, the
CC
     anti-CD34 mouse monoclonal antibody produced by the hybridoma ATCC
CC
     HB-11646 (designated 9069), the anti-CD34 antibody produced by
CC
     hybridoma ATCC HB-11885 (9079), or the anti-human breast cancer
CC
     antibody produced by hybridoma ATCC HB-11884 (9187), from a cell
CC
     surface antigen on a target cell. The peptides are useful for
CC
     displacing antibodies bound to cell surfaces to release cells that
CC
     have been positively selected by antibody-mediated binding to beads
CC
     or other solid support. AAY55107 to AAY55319 represent peptides used in
CC
     the exemplification of the present invention.
XX
SQ
     Sequence
                6 AA;
  Query Match
                          60.0%; Score 3; DB 20; Length 6;
  Best Local Similarity
                          100.0%; Pred. No. 9.3e+05;
  Matches
            3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                              0;
            2 VLR 4
QУ
              | | |
Db
            2 VLR 4
```

```
RESULT 18
AAY80220
ID
     AAY80220 standard; peptide; 6 AA.
XX
AC
     AAY80220;
XX
DT
     25-MAY-2000
                 (first entry)
XX
     Human B-type natriuretic peptide variant formula I C-terminal peptide.
DE
XX
KW
     Human; B-type natriuretic peptide; BNP; clearance receptor; diuretic;
     water imbalance; electrolyte imbalance; natriuretic peptide receptor;
KW
KW
     natriuresis; diuresis; vasodilation; hypotensive; cardiant; hepatotropic;
KW
     nephrotropic; vasorelaxant; hypertension; conqestive heart failure;
KW
     nephrotic syndrome; hepatic cirrhosis; pulmonary disease; renal failure.
XX
OS
     Homo sapiens.
OS
     Synthetic.
XX
ΡN
     US6028055-A.
XX
PD
     22-FEB-2000.
XX
PF
     21-OCT-1997;
                  97US-0954915.
XX
PR
     22-OCT-1996;
                    96US-0028854.
XX
     (GETH ) GENENTECH INC.
PA
XX
ΡI
     Schoenfeld JR, Lowe DG;
XX
     WPI; 2000-194846/17.
DR
XX
PT
     B-type natriuretic peptide (BNP) variant (I) having a decreased binding
PT
     affinity for the human clearance receptor, useful for treating
PT
     natriuresis, diuresis or vasodilation -
XX
     Disclosure; Column 3; 33pp; English.
PS
XX
CC
     The present invention describes a B-type natriuretic peptide (BNP)
CC
     variant (I) having a decreased binding affinity for the human clearance
CC
     receptor compared to human wild-type BNP. The present invention also
CC
     describes a method for treating a disorder of electrolyte balance
CC
     including natriuresis, diuresis or vasodilation comprising administering
CC
     a composition comprising (I). (I) has hypotensive, cardiant,
CC
     hepatotropic, nephrotropic, natriuretic, diuretic and vasorelaxant
CC
     activities. (I) can be used for the treatment or prophylaxis of
CC
     conditions associated with water or electrolyte imbalance and
CC
     hypertension, such as congestive heart failure (CHF), nephrotic syndrome
CC
     and hepatic cirrhosis, pulmonary disease, and renal failure due to
CC
     ineffective renal perfusion or reduced glomerular filtration rate. (I)
CC
     can also useful for treating natriuresis, diuresis or vasodilation.
CC
     The present sequence represents an C-terminal peptide option in the
CC
     BNP variant formula from the present invention.
XX
SQ
     Sequence
                6 AA;
```

```
Query Match
                          60.0%; Score 3; DB 21; Length 6;
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
            3; Conservative 0; Mismatches
                                                 0; Indels
                                                                 0; Gaps
                                                                             0;
            2 VLR 4
Qу
              2 VLR 4
Db
RESULT 19
AAY87031
    AAY87031 standard; Peptide; 6 AA.
ID
XX
AC
    AAY87031;
XX
    09-MAY-2000 (first entry)
DT
XX
DE
    Human haematopoietic CD34+ cell binding peptide SEQ ID #179.
XX
KW
     Human; haematopoietic CD34+ cell; binding peptide; monoclonal antibody;
KW
     non-enzymatic cell selection method; haematopoietic stem cell;
KW
    haematopoietic progenitor cell; antibody 561; breast cancer cell;
KW
     antibody 9187; cell surface determinant; diagnostic cell based assay.
XX
OS
     Homo sapiens.
XX
ΡN
    US6017719-A.
XX
PD
     25-JAN-2000.
XX
ΡF
     07-JUN-1995;
                    95US-0482528.
XX
PR
     14-JUN-1994; 94US-0259427.
XX
PA
     (NEXE-) NEXELL THERAPEUTICS INC.
XX
PΙ
    Guillermo R, Helgerson SL, Deans RJ, Tseng-Law J, Kobori JA;
PΙ
    Al-Abdaly FA;
XX
DR
    WPI; 2000-136676/12.
XX
PT
     Non-enzymatic method for the positive selection of target cells from a
PT
     heterogeneous cell suspension, useful for selecting human breast cancer
PT
     cells from a patient's blood or bone marrow -
XX
PS
     Example 9; Column 38; 82pp; English.
XX
CC
    This sequence represents a human haematopoietic CD34+ cell binding
CC
     peptide, and was used to test the method of the invention. The method is
CC
     a non-enzymatic method for the positive selection of one or more target
CC
     cells from a heterogeneous cell suspension, by using specific peptides
CC
    which effect the displacement and release of a specific target cell
CC
     from a specific monoclonal antibody. The method is useful for positive
CC
     selection and specific release of target human haematopoietic
CC
     stem/progenitor cells bound by the monoclonal anti-CD34 antibodies and
CC
     the antibody 561. The method is also useful for positive selection and
CC
     specific release of target human breast cancer cells, bound by the
```

```
monoclonal anti-breast cancer antibody 9187, from a patient's blood or
CC
CC
     bone marrow. Identification of peptide epitopes for antibodies which
CC
     recognise cell surface determinants also allows construction of
CC
     diagnostic cell based assays. The peptide mediated release is enzyme free
CC
     and thus leaves the cell surface proteins intact. Moreover, peptide
     mediated release leaves the target cell free of bound antibody or
CC
     antibody fragments. The method also produces a high yield of functional
CC
     target cells and is relatively inexpensive to carry out.
CC
XX
SO
     Sequence
                6 AA;
  Query Match
                          60.0%; Score 3; DB 21; Length 6;
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
  Matches
             3; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
                                                                               0;
            2 VLR 4
Qу
              111
Db
            2 VLR 4
RESULT 20
ABM00062
ΙD
     ABM00062 standard; Peptide; 6 AA.
XX
AC
     ABM00062;
XX
\mathsf{DT}
     02-APR-2003 (first entry)
XX
DE
     Savinas antibody binding peptide sequence 16.
XX
KW
     Allergen; protein coordinate data; vaccine; antiallergic; immunogenicity;
KW
     detergent; personal care composition; cosmetic.
XX
OS
     Unidentified.
XX
PN
     WO200183559-A2.
ХХ
PD
     08-NOV-2001.
XX
     30-APR-2001; 2001WO-DK00293.
PF
XX
PR
     28-APR-2000; 2000DK-0000707.
PR
     10-MAY-2000; 2000US-203345P.
PR
     28-FEB-2001; 2001DK-0000327.
PR
     21-MAR-2001; 2001US-277817P.
XX
PΑ
     (NOVO ) NOVOZYMES AS.
XX
PΙ
     Roggen EL, Ernst S, Svendsen A, Friis EP, Von Der Osten C;
XX
DR
     WPI; 2001-626552/72.
XX
PT
     Selecting protein variants having modified immunogenicity, used to
PΤ
     produce vaccines, detergents and personal care compositions, involves
PT
     localizing epitope sequences on the three-dimensional structure of a
PΤ
     protein -
XX
```

```
PS
     Example 1; Page 143; 513pp; English.
XX
CC
     The invention relates to selecting a protein variant having modified
CC
     immunogenicity, compared to a parent protein, comprising using the
CC
     antibody binding sequence to localise epitope sequences on the three
CC
     dimensional structure of the parent protein and defining an epitope area
CC
     including amino acids within 5 Angstrom of the epitope amino acids. The
CC
     method is useful for identifying structural epitopes on the 3-dimensional
CC
     surface of commercial and environmental allergens. Compositions
CC
     containing the protein variants are used as vaccines, detergents and
     personal care compositions, e.g. shampoo, balsam, hair conditioners, hair
CC
CC
     waving compositions, hair dyeing compositions, hair tonic, hair liquid,
CC
    hair cream, hair rinse, hair spray, chewing gum, skin cream, sunscreen,
CC
     shaving foam, cream soap, skin milk or foundation. The present sequence
CC
     is that of an antibody binding peptide sequence related to the invention.
XX
SQ
     Sequence
                6 AA;
  Query Match
                          60.0%; Score 3; DB 22; Length 6;
                          100.0%; Pred. No. 9.3e+05;
  Best Local Similarity
           3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
            2 VLR 4
Qу
              \{\}\}
            2 VLR 4
Db
RESULT 21
ABM00074
     ABM00074 standard; Peptide; 6 AA.
XX
AC
     ABM00074;
XX
DT
     02-APR-2003 (first entry)
XX
DΕ
     Savinas antibody binding peptide sequence 28.
XX
KW
     Allergen; protein coordinate data; vaccine; antiallergic; immunogenicity;
     detergent; personal care composition; cosmetic.
KW
XX
OS
     Unidentified.
XX
ΡN
     WO200183559-A2.
XX
PD
     08-NOV-2001.
XX
PF
     30-APR-2001; 2001WO-DK00293.
XX
PR
     28-APR-2000; 2000DK-0000707.
PR
     10-MAY-2000; 2000US-203345P.
PR
     28-FEB-2001; 2001DK-0000327.
PR
     21-MAR-2001; 2001US-277817P.
XX
PA
     (NOVO ) NOVOZYMES AS.
XX
PΙ
     Roggen EL, Ernst S, Svendsen A, Friis EP, Von Der Osten C;
XX
```

```
DR
     WPI; 2001-626552/72.
XX
PΤ
     Selecting protein variants having modified immunogenicity, used to
     produce vaccines, detergents and personal care compositions, involves
PT
PT
     localizing epitope sequences on the three-dimensional structure of a
PT
     protein -
XX
PS
     Example 1; Page 143; 513pp; English.
XX
CC
     The invention relates to selecting a protein variant having modified
CC
     immunogenicity, compared to a parent protein, comprising using the
CC
     antibody binding sequence to localise epitope sequences on the three
CÇ
     dimensional structure of the parent protein and defining an epitope area
     including amino acids within 5 Angstrom of the epitope amino acids. The
CC
CC
     method is useful for identifying structural epitopes on the 3-dimensional
CC
     surface of commercial and environmental allergens. Compositions
CC
     containing the protein variants are used as vaccines, detergents and
CC
     personal care compositions, e.g. shampoo, balsam, hair conditioners, hair
CC
     waving compositions, hair dyeing compositions, hair tonic, hair liquid,
CC
     hair cream, hair rinse, hair spray, chewing gum, skin cream, sunscreen,
CC
     shaving foam, cream soap, skin milk or foundation. The present sequence
CC
     is that of an antibody binding peptide sequence related to the invention.
XX
SQ
     Sequence
                6 AA;
                          60.0%; Score 3; DB 22; Length 6;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
             3; Conservative
                              0; Mismatches
                                                  0; Indels
                                                                  0; Gaps
                                                                              0;
            2 VLR 4
Qу
              |\cdot|
Db
            2 VLR 4
RESULT 22
AAU03882
ΙD
     AAU03882 standard; Peptide; 6 AA.
XX
AC
     AAU03882;
XX
DT
     12-SEP-2001 (first entry)
XX
DE
     G protein-coupled receptor-like (GPCR-like) receptor binding peptide #52.
XX
KW
     G protein-coupled receptor-like receptor; GPCR-like receptor; helminth;
KW
     endoparasite; ectoparasite; invertebrate; insect; neurological disorder;
KW
     neuromuscular disorder; human; nematode; lobster; locust; mollusc; leech;
KW
     fruitfly.
XX
OS
     Synthetic.
XX
     WO200138533-A2.
PN
XX
PD
     31-MAY-2001.
XX
     24-NOV-2000; 2000WO-US32225.
ΡF
XX
```

```
PR
     24-NOV-1999;
                  99US-0167523.
XX
PΑ
     (PHAA ) PHARMACIA & UPJOHN.
XX
PΙ
     Lowery DE, Geary TG, Kubiak TM, Larsen MJ;
XX
DR
     WPI; 2001-343952/36.
XX
PT
     Using G-protein-coupled receptor (GPCR)-like receptors to identify
PΤ
     candidate compounds for the treatment and prevention of invertebrate
PT
     parasites, especially helminths and insects -
XX
PS
     Claim 14; Page 56; 219pp; English.
XX
CC
     The sequence represents a G protein-coupled receptor-like (GPCR-like)
CC
     receptor protein. GPCR-like receptors and their associated nucleic acids
CC
     may be used to identify candidate compounds for their ability to modulate
     the activity of GPCRs. The sequences therefore are useful for treating
CC
CC
     and preventing infection by endoparasitic and ectoparasitic invertebrate
CC
     parasites, especially helminths and insects, and particularly ailments
CC
     related to aberrant neurological and neuromuscular function.
XX
SO
     Sequence
                6 AA;
  Query Match
                          60.0%; Score 3; DB 22; Length 6;
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
            3; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
                                                                              0;
            2 VLR 4
Qу
              111
            3 VLR 5
Db
RESULT 23
AAU03890
     AAU03890 standard; Peptide; 6 AA.
ΙD
XX
AC
     AAU03890;
XX
DT
     12-SEP-2001 (first entry)
XX
DΕ
     G protein-coupled receptor-like (GPCR-like) receptor binding peptide #60.
XX
KW
     G protein-coupled receptor-like receptor; GPCR-like receptor; helminth;
KW
     endoparasite; ectoparasite; invertebrate; insect; neurological disorder;
KW
     neuromuscular disorder; human; nematode; lobster; locust; mollusc; leech;
KW
     fruitfly.
XX
OS
     Synthetic.
XX
PN
     WO200138533-A2.
XX
PD
     31-MAY-2001.
XX
PF
     24-NOV-2000; 2000WO-US32225.
XX
PR
     24-NOV-1999; 99US-0167523.
```

```
XX
PA
     (PHAA ) PHARMACIA & UPJOHN.
XX
PΙ
     Lowery DE, Geary TG, Kubiak TM, Larsen MJ;
XX
DR
     WPI; 2001-343952/36.
XX
PT
     Using G-protein-coupled receptor (GPCR)-like receptors to identify
PΤ
     candidate compounds for the treatment and prevention of invertebrate
PT
     parasites, especially helminths and insects -
XX
PS
     Claim 14; Page 56; 219pp; English.
XX
CC
     The sequence represents a G protein-coupled receptor-like (GPCR-like)
CC
     receptor protein. GPCR-like receptors and their associated nucleic acids
CC
     may be used to identify candidate compounds for their ability to modulate
     the activity of GPCRs. The sequences therefore are useful for treating
CC
CC
     and preventing infection by endoparasitic and ectoparasitic invertebrate
CC
     parasites, especially helminths and insects, and particularly ailments
CC
     related to aberrant neurological and neuromuscular function.
XX
SQ
     Sequence
                6 AA;
  Query Match
                          60.0%; Score 3; DB 22; Length 6;
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
           3; Conservative
                               0; Mismatches
                                                 0; Indels
                                                                 0; Gaps
                                                                              0;
  Matches
Qу
            2 VLR 4
              3 VLR 5
Db
RESULT 24
AAU03891
     AAU03891 standard; Peptide; 6 AA.
ID
XX
AC
     AAU03891;
XX
DT
     12-SEP-2001 (first entry)
XX
DΕ
     G protein-coupled receptor-like (GPCR-like) receptor binding peptide #61.
XX
KW
     G protein-coupled receptor-like receptor; GPCR-like receptor; helminth;
KW
     endoparasite; ectoparasite; invertebrate; insect; neurological disorder;
     neuromuscular disorder; human; nematode; lobster; locust; mollusc; leech;
KW
KW
     fruitfly.
XX
OS
     Synthetic.
XX
ΡN
     WO200138533-A2.
XX
PD
     31-MAY-2001.
XX
PF
     24-NOV-2000; 2000WO-US32225.
XX
PR
     24-NOV-1999; 99US-0167523.
XX
```

```
PΑ
     (PHAA ) PHARMACIA & UPJOHN.
XX
PΙ
     Lowery DE, Geary TG, Kubiak TM, Larsen MJ;
XX
DR
     WPI; 2001-343952/36.
XX
PT
     Using G-protein-coupled receptor (GPCR)-like receptors to identify
PT
     candidate compounds for the treatment and prevention of invertebrate
PT
     parasites, especially helminths and insects -
XX
PS
     Claim 14; Page 56; 219pp; English.
XX
CC
     The sequence represents a G protein-coupled receptor-like (GPCR-like)
CC
     receptor protein. GPCR-like receptors and their associated nucleic acids
CC
     may be used to identify candidate compounds for their ability to modulate
CC
     the activity of GPCRs. The sequences therefore are useful for treating
CÇ
     and preventing infection by endoparasitic and ectoparasitic invertebrate
CC
     parasites, especially helminths and insects, and particularly ailments
CC
     related to aberrant neurological and neuromuscular function.
XX
SO
     Sequence 6 AA;
  Query Match
                          60.0%; Score 3; DB 22; Length 6;
  Best Local Similarity
                          100.0%; Pred. No. 9.3e+05;
  Matches
             3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                              0;
Qу
            2 VLR 4
              Db
            3 VLR 5
RESULT 25
AAU97098
ID
     AAU97098 standard; Peptide; 6 AA.
XX
AC
     AAU97098;
XX
DT
     24-SEP-2002 (first entry)
XX
DE
     Abscisic acid (ABA) hydroxylase, conserved motif #1.
XX
KW
     ABA hydroxylase; abscisic acid hydroxylase; transgenic; plant;
KW
     enzyme.
XX
OS
     Synthetic.
XX
PN
     WO200246377-A2.
XX
PD
     13-JUN-2002.
XX
PF
     06-DEC-2001; 2001WO-CA01756.
XX
     07-DEC-2000; 2000US-251518P.
PR
XX
PΑ
     (CANA ) NAT RES COUNCIL CANADA.
XX
PΙ
     Krochko JE, Cutler AJ, Abrams SR;
```

```
XX
DR
    WPI; 2002-519663/55.
XX
PT
     New isolated and purified DNA that encodes protein having abscisic
PT
     acid (ABA) hydroxylase activity, useful for altering catabolism of
PT
     abscisic acid in plants
XX
PS
     Claim 3; Page 72; 117pp; English.
XX
CC
     The invention relates to an isolated and purified DNA (I) that encodes a
CC
     protein having abscisic acid (ABA) hydroxylase activity. (I) is useful
CC
     for producing a transgenic plant which involves introducing (I) into a
     genome of the plant or its part, and carrying out plant growth and
CC
CC
     development. (I) is useful for modifying catabolism of ABA or ABA
CC
     analogues in a plant. ABA hydroxylase clone pBE10-30-3 cDNA sequence
CC
     is useful for identification of related sequences from other plant
CC
     species. (I) is also useful for altering ABA and ABA analog catabolism
CC
     in plants. The present sequence represents abscisic acid (ABA)
CC
    hydroxylase conserved motif #1.
XX
SO
     Sequence
                6 AA;
  Query Match
                          60.0%; Score 3;
                                            DB 23; Length 6;
  Best Local Similarity
                          100.0%; Pred. No. 9.3e+05;
 Matches
             3; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
Qу
            2 VLR 4
Db
            2 VLR 4
RESULT 26
AAM47693
ID
    AAM47693 standard; Peptide; 6 AA.
XX
AC
    AAM47693;
XX
DT
     22-FEB-2002
                 (first entry)
XX
DE
    Human HARE peptide fragment PR 1869 #2.
XX
KW
     HARE; Hyaluronic Acid Receptor for Endocytosis; hyaluronan; chondroitin;
KW
     chondroitin sulphate; extracellular matrix; cartilage; skin; human; rat;
KW
    vitreous humour; endocytic receptor; glycosaminoglycan.
XX
OS
     Homo sapiens.
XX
PN
    WO200181544-A2.
XX
PD
     01-NOV-2001.
XX
PF
    25-APR-2001; 2001WO-US13403.
XX
PR
     25-APR-2000; 2000US-199538P.
PR
     02-NOV-2000; 2000US-245320P.
XX
PA
     (WEIG/) WEIGEL P A.
```

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PΑ
     (ZHOU/) ZHOU B.
PΑ
     (WEIG/) WEIGEL J A.
XX
PΙ
     Weigel PA,
                 Zhou B, Weigel JA;
XX
    WPI; 2002-049271/06.
DR
XX
PT
     New mammalian hyaluronic acid receptor for endocytosis, useful e.g. for
PT
     identifying agents that inhibit binding to hyaluronic acid, and related
PΤ
     nucleic acid -
XX
PS
     Example; Page 94; 263pp; English.
XX
CC
     The present invention relates to sequences for rat and human HARE
CC
     (Hyaluronic Acid Receptor for Endocytosis, ABA04648, ABA04662, AAM47675
CC
     and AAM47684). HARE can bind specifically to at least one of hyaluronic
CC
     acid (HA, also known as hyaluronan), chondroitin (C) or chondroitin
CC
     sulphate (CS). HA is an extracellular matrix component of all tissues,
CC
     in particular cartilage, skin and vitreous humour. HARE is the endocytic
CC
     receptor responsible for removing HA and other glycosaminoglycans from
CC
     the circulation. The present sequence is a peptide fragment of HARE,
CC
     which was used in an example from the present invention.
XX
SQ
     Sequence
                6 AA;
  Query Match
                          60.0%; Score 3; DB 23; Length 6;
 Best Local Similarity 100.0%; Pred. No. 9.3e+05;
            3; Conservative 0; Mismatches
                                                 0; Indels
                                                                  0; Gaps
                                                                              0;
            2 VLR 4
Qу
              111
            4 VLR 6
RESULT 27
AAW51299
ΙD
    AAW51299 standard; peptide; 7 AA.
XX
AC
    AAW51299;
XX
DT
     15-SEP-1998 (first entry)
XX
    Human B-type natriuretic peptide variant, C-terminal sequence.
DE
XX
KW
     B-type natriuretic peptide; clearance receptor; electrolyte balance;
KW
     diuretic; vasodilator; circulation; natriuresis; diuresis; hNPR-C;
KW
     cyclic guanosine monophosphate; cGMP; second messenger; variant.
XX
OS
    Synthetic.
XX
FH
                     Location/Qualifiers
FT
    Misc-difference 1
FT
                     /label= Asn, Lys
FT
    Misc-difference 5
FT
                     /label = Arg, Lys
XX
ΡN
    W09817690-A1.
```

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XX
PD
     30-APR-1998.
XX
PF
     09-OCT-1997;
                   97WO-US18384.
XX
PR
     22-OCT-1996;
                    96US-0731880.
XX
PΑ
     (GETH ) GENENTECH INC.
XX
ΡI
     Lowe DG, Schoenfeld JR;
XX
DR
     WPI; 1998-261429/23.
XX
PΤ
     Variants of brain natriuretic peptide with reduced affinity for
PT
     clearance receptor - for treating disorders of electrolyte balance
PT
     and as diuretics and vasodilators, have increased circulation time
PT
     and in vivo activity
XX
PS
     Disclosure; Page 8; 55pp; English.
XX
CC
     The invention relates to variants of brain natriuretic peptide (BNP)
CC
     with reduced affinity for the human clearance receptor (hNPR-C) relative
CC
     to wild-type BNP. The variants are used: (a) to treat or prevent
CC
     disorders of electrolyte balance, or (b) to induce natriuresis, diuresis
CC
     or vasodilation. Typical applications are in congestive heart failure,
CC
     arrhythmia, hypertension, nephrotic syndrome, pre-eclampsia, premenstrual
CC
     syndrome, hepatic cirrhosis, pulmonary disease and renal failure
CC
     (associated with inefficient renal perfusion or reduced glomerular
CC
     filtration rate). The variants are also useful as intermediates and as
CC
    modulators of other compounds with similar activities. Although the
CC
    variants have reduced affinity for NPR-C, they have at least equal
CC
     affinity for the A receptor (NPR-A) and ability to stimulate cyclic
CC
     guanosine monophosphate (cGMP), second messenger, production. The
CC
     variants should persist for longer in the circulation and thus have
CC
     greater in vivo activity. The present sequence represents the
CC
     C-terminal sequence of a BNP variant.
XX
SO
     Sequence
                7 AA;
  Ouery Match
                          60.0%; Score 3; DB 19; Length 7;
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
  Matches
             3; Conservative 0; Mismatches
                                                                 0; Gaps
                                                0; Indels
                                                                             0;
            2 VLR 4
Qу
              Db
            2 VLR 4
RESULT 28
AAY41942
ΙD
    AAY41942 standard; Peptide; 7 AA.
XX
AC
    AAY41942;
XX
DT
     09-DEC-1999 (first entry)
XX
DΕ
     Rheumatoid arthritis diagnostic protein isoform peptide #93.
```

XXKW Human; rheumatoid arthritis; RA; diagnosis; RPI; RADF; detection; ΚW rheumatoid arthritis diagnostic feature; ERPI; synovial fluid; KW rheumatoid arthritis diagnostic protein isoform; screening; KW expression reference protein isoform; prognosis. XX OS Homo sapiens. XX PNWO9947925-A2. XX PD 23-SEP-1999. XXΡF 15-MAR-1999; 99WO-GB00763. XX PR 13-MAR-1998; 98GB-0005477. XXPA (OXFO-) OXFORD GLYCOSCIENCES UK LTD. XX ΡI Parekh RB, Patel TP, Townsend RR; XX DR WPI; 1999-571871/48. XX PΤ Diagnosis of human rheumatoid arthritis by two-dimensional PΤ electrophoresis -XX PS Disclosure; Page 19; 157pp; English. XX A method has been developed for the diagnosis of human rheumatoid CC CC arthritis (RA) using two-dimensional electrophoresis to generate a CCtwo-dimensional array of features. The method can be used for screening, CCdiagnosis and prognosis of RA in a subject or for monitoring the effect CC of an anti-RA drug or therapy administered to a subject. The method CCcomprises: (a) analysing a sample of serum or plasma and optionally CC synovial fluid by two-dimensional electrophoresis, to generate a two-CCdimensional array of features; (b) identifying at least one chosen CC feature whose relative abundance correlates with the presence or absence CC of RA; and (c) comparing the abundance of each chosen feature in the CCsample with the abundance of that chosen feature in serum or plasma from CCone or more persons without RA, where the relative abundance of the CC chosen feature or features in the sample indicates the presence or CCabsence of RA in the subject. The method can also be used in clinical CCstudies for testing drugs for therapy of RA, for purification of RA-CCdiagnostic protein isoforms (RPIs), and for production of antibodies to CCRPIs. The RA-diagnostic feature (RADF) proteins can be used to identify CC compounds that promote or inhibit their activity, which are then used as CCRA drugs. Nucleic acid encoding RADFs can be used in gene therapy CCprotocols. AAY41844 to AAY42100 represent RPI peptides, AAY42101 to CC AAY42103 represent expression reference protein isoform peptides and CC AAZ25066 to AAZ25068 represent degenerate probes for RPIs, which are all CC used in the exemplification of the present invention. XX SO Sequence 7 AA;

Query Match 60.0%; Score 3; DB 20; Length 7; Best Local Similarity 100.0%; Pred. No. 9.3e+05; Matches 3; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

```
2 VLR 4
Qу
              | | | |
            5 VLR 7
Db
RESULT 29
AAY14768
     AAY14768 standard; peptide; 7 AA.
ΙD
XX
AC
     AAY14768;
XX
DT
     11-OCT-1999 (first entry)
XX
DE
     P450 enzyme conserved peptide motif.
XX
     Genetic proximity; gene expression; cell characterisation; homeobox gene;
KW
KW
     genetic defect; reverse transcriptase polymerase chain reaction; RT-PCR;
KW
     kinase gene; protein phosphatase; P450; steroid receptor; cadherin.
XX
OS
     Homo sapiens.
XX
PN
     WO9934016-A2.
XX
PD
     08-JUL-1999.
XX
ΡF
     28-DEC-1998;
                    98WO-IL00625.
XX
PR
     16-OCT-1998;
                    98IL-0126627.
PR
     29-DEC-1997;
                  97IL-0122793.
XX
     (GENE-) GENENA LTD.
PΑ
XX
PΙ
     Vider B;
XX
     WPI; 1999-419113/35.
DR
     N-PSDB; AAZ18246.
DR
XX
PT
     Identifying and characterizing cells by comparing the pattern of
PΤ
     gene expression in a selected gene family
XX
PS
     Examples; Page 50; 102pp; English.
XX
CC
     The invention provides a new method for identifying and characterising
CC
     cells. The method for determining the genetic proximity of a first cell
CC
     and a second cell comprises: (a) obtaining the first cell and the second
CC
     cell; (b) determining in the first cell and the second cell the pattern
CC
     of expression of genes in a selected gene family; and (c) calculating a
CC
     proximity index using a specified formula. The methods can be used for
CC
     characterising cells, e.g. for determining the origin of a cell, its
CC
     genetic status, whether it carries a genetic defect, or whether it is
CC
     transformed. They can be used for detecting a selected genetic defect in
CC
     an individual, e.g. a fetus. They can also be used for determining the
CC
     effect of a selected treatment on a test cell. They can also be used for
CC
     obtaining cells capable of expressing an homeobox related desired
CC
     property. The method uses reverse transcriptase polymerase chain
```

reaction (RT-PCR) for determining the pattern of gene expression in a

selected gene family. Sequences AAZ17803-Z18342 represent primers that

CC

CC

```
CC
     can be used in the RT-PCR reactions to determine the pattern of gene
CC
     expression. The gene family can be selected from a set of homeobox genes,
CC
     kinase genes, protein phosphatase genes, P450 enzyme genes, steroid
CC
     receptor superfamily genes or cadherin superfamily genes. Sequences
CC
     AAY14603-813 represent conserved peptide motifs based on which the
CC
     primers of the invention were designed.
XX
SQ
     Sequence
                7 AA;
  Query Match
                          60.0%; Score 3; DB 20; Length 7;
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
  Matches
             3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                              0;
            2 VLR 4
Qу
              111
Db
            5 VLR 7
RESULT 30
AAY16932
ID
    AAY16932 standard; peptide; 7 AA.
XX
AC
     AAY16932;
XX
DT
     20-JUL-1999 (first entry)
XX
DΕ
     Heat shock protein (hsp) binding peptide.
XX
KW
     Conjugate peptide; heat shock protein; hsp; phage display library; virus;
KW
     surface protein; tethering peptide; chaperone process; cytokine; cancer;
KW
     neoplastic disease; infectious disease; bacterium; immune system; fungus;
KW
     acquired immune deficiency; autoimmune disease.
XX
OS
     Synthetic.
XX
PN
     WO9922761-A1.
XX
     14-MAY-1999.
PD
XX
PF
     22-OCT-1998;
                    98WO-US22335.
XX
PR
     31-OCT-1997;
                    97US-0961707.
XX
PΑ
     (SLOK ) SLOAN KETTERING INST CANCER RES.
XX
PΙ
     Hartl U, Hoe MH, Houghton A, Mayhew M, Moroi Y;
PΙ
     Ouerfelli O, Rothman JE;
XX
DR
     WPI; 1999-313177/26.
XX
Tq
     Identifying peptides which bind heat shock proteins
XX
PS
     Examples; Page 21; 155pp; English.
XX
CC
     The invention relates to conjugate peptides engineered to noncovalently
CC
     bind to heat shock proteins (hsp). A method of identifying a hsp binding
CC
     peptide comprises (a) contacting a phage display library having
```

```
CC
     hsp target, and bound to a benzoquinone ansamycin antibiotic (BAA), in a
     physiologic binding buffer; (b) isolating a phage binding to the hsp
CC
     target; and (c) identifying the inserted peptide expressed. The peptides
CC
CC
     which bind to a hsp can be used as tethering peptides for a hsp which may
CC
     serve as an accessory in a chaperone process and/or may comprise a
CC
     cytokine. They can also be coupled to antigens to induce an immune
CC
     response. Such compositions can be used for treating neoplastic disease,
CC
     e.q. cancers, infectious diseases, e.g. diseases caused by a bacterium,
CC
     virus, protozoan, mycoplasma, fungus, yeast, parasite or prion, or a
CC
     disease of the immune system, e.g. acquired immune deficiencies or
CC
     autoimmune diseases.
XX
SO
     Sequence
                7 AA;
                          60.0%; Score 3; DB 20; Length 7;
  Ouery Match
  Best Local Similarity
                          100.0%; Pred. No. 9.3e+05;
  Matches
            3; Conservative
                               0; Mismatches
                                                  0; Indels
                                                                  0; Gaps
Qу
            2 VLR 4
              | | | |
Dh
            4 VLR 6
RESULT 31
AAY16976
ΙD
     AAY16976 standard; peptide; 7 AA.
XX
AC
     AAY16976;
XX
DT
     20-JUL-1999 (first entry)
XX
DE
     Heat shock protein (hsp) binding peptide.
XX
KW
     Conjugate peptide; heat shock protein; hsp; phage display library; virus;
     surface protein; tethering peptide; chaperone process; cytokine; cancer;
KW
KW
     neoplastic disease; infectious disease; bacterium; immune system; fungus;
KW
     acquired immune deficiency; autoimmune disease.
XX
OS
     Synthetic.
XX
PN
     WO9922761-A1.
XX
PD
     14-MAY-1999.
XX
PF
     22-OCT-1998;
                    98WO-US22335.
XX
PR
     31-OCT-1997;
                    97US-0961707.
XX
PA
     (SLOK ) SLOAN KETTERING INST CANCER RES.
XX
PΙ
     Hartl U, Hoe MH, Houghton A, Mayhew M, Moroi Y;
PΙ
     Ouerfelli O, Rothman JE;
XX
DR
     WPI; 1999-313177/26.
XX
PT
     Identifying peptides which bind heat shock proteins
```

bacteriophage expressing, in a surface protein, inserted peptides with a

CC

```
XX
PS
     Examples; Page 23; 155pp; English.
XX
CC
     The invention relates to conjugate peptides engineered to noncovalently
CC
     bind to heat shock proteins (hsp). A method of identifying a hsp binding
CC
     peptide comprises (a) contacting a phage display library having
CC
     bacteriophage expressing, in a surface protein, inserted peptides with a
CC
     hsp target, and bound to a benzoquinone ansamycin antibiotic (BAA), in a
CC
     physiologic binding buffer; (b) isolating a phage binding to the hsp
CC
     target; and (c) identifying the inserted peptide expressed. The peptides
CC
     which bind to a hsp can be used as tethering peptides for a hsp which may
CC
     serve as an accessory in a chaperone process and/or may comprise a
CC
     cytokine. They can also be coupled to antigens to induce an immune
CC
     response. Such compositions can be used for treating neoplastic disease,
CC
     e.g. cancers, infectious diseases, e.g. diseases caused by a bacterium,
CC
     virus, protozoan, mycoplasma, fungus, yeast, parasite or prion, or a
CC
     disease of the immune system, e.g. acquired immune deficiencies or
CC
     autoimmune diseases.
XX
SQ
     Sequence
                7 AA;
  Query Match
                          60.0%; Score 3; DB 20; Length 7;
                          100.0%; Pred. No. 9.3e+05;
  Best Local Similarity
  Matches
            3; Conservative 0; Mismatches
                                                 0; Indels
            2 VLR 4
Qу
              \prod
            5 VLR 7
Db
RESULT 32
AAY80233
     AAY80233 standard; peptide; 7 AA.
XX
AC
     AAY80233;
XX
DT
     25-MAY-2000
                 (first entry)
XX
DE
     B-type natriuretic peptide variant C-terminal peptide SEQ ID NO:42.
XX
KW
     Human; B-type natriuretic peptide; BNP; clearance receptor; diuretic;
KW
     water imbalance; electrolyte imbalance; natriuretic peptide receptor;
KW
     natriuresis; diuresis; vasodilation; hypotensive; cardiant; hepatotropic;
KW
     nephrotropic; vasorelaxant; hypertension; congestive heart failure;
KW
     nephrotic syndrome; hepatic cirrhosis; pulmonary disease; renal failure.
XX
OS
     Mammalia.
XX
FΗ
                     Location/Qualifiers
FT
     Misc-difference 1
FT
                     /label= Asn, Lys
FT
     Misc-difference 5
FT
                     /label= Arg, Lys
XX
     US6028055-A.
PN
XX
     22-FEB-2000.
PD
```

```
XX
ΡF
     21-OCT-1997; 97US-0954915.
XX
PR
     22-OCT-1996;
                  96US-0028854.
XX
PA
     (GETH ) GENENTECH INC.
XX
PΙ
     Schoenfeld JR, Lowe DG;
XX
DR
     WPI; 2000-194846/17.
XX
PT
     B-type natriuretic peptide (BNP) variant (I) having a decreased binding
PΤ
     affinity for the human clearance receptor, useful for treating
PΤ
     natriuresis, diuresis or vasodilation -
XX
PS
     Disclosure; Column 8; 33pp; English.
XX
CC
     The present invention describes a B-type natriuretic peptide (BNP)
CC
     variant (I) having a decreased binding affinity for the human clearance
CC
     receptor compared to human wild-type BNP. The present invention also
CC
     describes a method for treating a disorder of electrolyte balance
CC
     including natriuresis, diuresis or vasodilation comprising administering
CC
     a composition comprising (I). (I) has hypotensive, cardiant,
CC
     hepatotropic, nephrotropic, natriuretic, diuretic and vasorelaxant
CC
     activities. (I) can be used for the treatment or prophylaxis of
CC
     conditions associated with water or electrolyte imbalance and
CC
     hypertension, such as congestive heart failure (CHF), nephrotic syndrome
CC
     and hepatic cirrhosis, pulmonary disease, and renal failure due to
CC
     ineffective renal perfusion or reduced glomerular filtration rate. (I)
CC
     can also useful for treating natriuresis, diuresis or vasodilation.
CC
     The present sequence represents an C-terminal peptide from a BNP
CC
     variant given in the present invention.
XX
SO
     Sequence
                7 AA;
  Query Match
                          60.0%; Score 3; DB 21; Length 7;
  Best Local Similarity
                          100.0%; Pred. No. 9.3e+05;
            3; Conservative 0; Mismatches 0; Indels
Qу
            2 VLR 4
              111
Db
            2 VLR 4
RESULT 33
AAU72074
     AAU72074 standard; Peptide; 7 AA.
XX
AC
     AAU72074;
XX
DT
     26-FEB-2002 (first entry)
XX
DE
     Melanoma antigen, javelin peptide #60.
XX
KW
     Melanoma antigen; MART-1; MAGE-1; qp100; cytostatic; immune response;
KW
     immunotherapeutic; heat shock protein; tyrosinase; BAGE; NYEs01; GM2;
     tyrosinase related protein 1; tyrosinase related protein 2; vaccine;
KW
```

```
KW
     javelin molecule; melanoma antigen recognised by T cells-1; human.
XX
OS
     Bacteriophage M13.
XX
ΡN
     W0200178655-A2.
XX
DD
     25-OCT-2001.
XX
PF
     17-APR-2001; 2001WO-US12449.
XX
PR
     17-APR-2000; 2000US-197462P.
XX
PΑ
     (HOUG/) HOUGHTON A.
PΑ
     (LIVI/) LIVINGSTON P.
PΑ
     (ALAW/) AL-AWQATI Q.
PΑ
     (MAYH/) MAYHEW M.
PA
     (HOEM/) HOE M.
XX
PΙ
     Houghton A, Livingston P, Al-awqati Q, Mayhew M,
XX
DR
     WPI; 2001-663092/76.
XX
PT
     Anti cancer vaccine for the treatment of melanoma comprises a heat
PT
     shock protein and a melanoma antigen i.e. tyrosinase -
XX
PS
     Disclosure; Page 17; 150pp; English.
XX
CC
     The invention relates to a method of induction of an immune response,
CC
     comprising administration of an immunotherapeutic composition, comprising
CC
     a heat shock protein, and a melanoma antigen, where the melanoma
CC
     antiqen is selected from tyrosinase, tyrosinase related protein 1,
CC
     tyrosinase related protein 2, gp 100, MAGE antigens, BAGE antigens,
CC
     NYEs01, MART antigens, GM2, antigenic portions and combinations of these.
CC
     The melanoma antigen is covalently bound to a javelin molecule, where the
CC
     melanoma antigen bound to the javelin molecule is non-covalently bound to
CC
     the heat shock protein. The composition is useful for inducing an immune
CC
     response for the treatment of melanoma. AAU71980-AAU72481 represent
CC
     melanoma antigen peptides of the invention.
XX
     Sequence
SO
                7 AA;
  Query Match
                          60.0%; Score 3; DB 22; Length 7;
 Best Local Similarity
                         100.0%; Pred. No. 9.3e+05;
             3; Conservative 0; Mismatches
                                                 0; Indels
                                                                 0; Gaps
            2 VLR 4
Qу
              Db
            4 VLR 6
RESULT 34
ΙD
    AAU72118 standard; Peptide; 7 AA.
XX
AC
    AAU72118;
XX
     26-FEB-2002 (first entry)
DT
```

```
XX
DΕ
     Melanoma antigen, javelin peptide #104.
XX
KW
     Melanoma antigen; MART-1; MAGE-1; gp100; cytostatic; immune response;
KW
     immunotherapeutic; heat shock protein; tyrosinase; BAGE; NYEs01; GM2;
KW
     tyrosinase related protein 1; tyrosinase related protein 2; vaccine;
KW
     javelin molecule; melanoma antigen recognised by T cells-1; human.
XX
OS
     Bacteriophage M13.
XX
PN
     W0200178655-A2.
XX
PD
     25-OCT-2001.
XX
     17-APR-2001; 2001WO-US12449.
PF
XX
PR
     17-APR-2000; 2000US-197462P.
XX
PΑ
     (HOUG/) HOUGHTON A.
PΑ
     (LIVI/) LIVINGSTON P.
PA
     (ALAW/) AL-AWQATI Q.
PA
     (MAYH/) MAYHEW M.
PΑ
     (HOEM/) HOE M.
XX
ΡI
     Houghton A, Livingston P, Al-awqati Q, Mayhew M, Hoe M;
XX
DR
     WPI; 2001-663092/76.
XX
PT
     Anti cancer vaccine for the treatment of melanoma comprises a heat
PΤ
     shock protein and a melanoma antiqen i.e. tyrosinase -
XX
PS
     Disclosure; Page 18; 150pp; English.
XX
CC
     The invention relates to a method of induction of an immune response,
CC
     comprising administration of an immunotherapeutic composition, comprising
CC
     a heat shock protein, and a melanoma antigen, where the melanoma
CC
     antigen is selected from tyrosinase, tyrosinase related protein 1,
CC
     tyrosinase related protein 2, qp 100, MAGE antigens, BAGE antigens,
CC
     NYEs01, MART antigens, GM2, antigenic portions and combinations of these.
CC
     The melanoma antigen is covalently bound to a javelin molecule, where the
CC
     melanoma antigen bound to the javelin molecule is non-covalently bound to
CC
     the heat shock protein. The composition is useful for inducing an immune
CC
     response for the treatment of melanoma. AAU71980-AAU72481 represent
CC
     melanoma antigen peptides of the invention.
XX
SO
     Sequence
                7 AA;
                          60.0%; Score 3; DB 22; Length 7;
  Query Match
                          100.0%; Pred. No. 9.3e+05;
  Best Local Similarity
  Matches
            3; Conservative 0; Mismatches
                                                0; Indels
                                                                 0; Gaps
                                                                              0;
QУ
            2 VLR 4
              111
Db
            5 VLR 7
```

```
AAU03883
     AAU03883 standard; Peptide; 7 AA.
XX
AC
     AAU03883;
XX
DT
     12-SEP-2001
                 (first entry)
XX
DE
     G protein-coupled receptor-like (GPCR-like) receptor binding peptide #53.
XX
KW
     G protein-coupled receptor-like receptor; GPCR-like receptor; helminth;
KW
     endoparasite; ectoparasite; invertebrate; insect; neurological disorder;
KW
     neuromuscular disorder; human; nematode; lobster; locust; mollusc; leech;
KW
     fruitfly.
XX
OS
     Synthetic.
XX
PN
     WO200138533-A2.
XX
PD
     31-MAY-2001.
XX
PF
     24-NOV-2000; 2000WO-US32225.
XX
PR
     24-NOV-1999;
                    99US-0167523.
XX
PA
     (PHAA ) PHARMACIA & UPJOHN.
XX
PΙ
     Lowery DE, Geary TG, Kubiak TM, Larsen MJ;
XX
DR
     WPI; 2001-343952/36.
XX
PT
     Using G-protein-coupled receptor (GPCR)-like receptors to identify
PT
     candidate compounds for the treatment and prevention of invertebrate
PT
     parasites, especially helminths and insects -
XX
PS
     Claim 14; Page 56; 219pp; English.
XX
CC
     The sequence represents a G protein-coupled receptor-like (GPCR-like)
CC
     receptor protein. GPCR-like receptors and their associated nucleic acids
CC
     may be used to identify candidate compounds for their ability to modulate
CC
     the activity of GPCRs. The sequences therefore are useful for treating
CC
     and preventing infection by endoparasitic and ectoparasitic invertebrate
CC
     parasites, especially helminths and insects, and particularly ailments
CC
     related to aberrant neurological and neuromuscular function.
XX
SO
     Sequence
                7 AA;
  Query Match
                          60.0%; Score 3; DB 22; Length 7;
  Best Local Similarity
                          100.0%; Pred. No. 9.3e+05;
  Matches
            3; Conservative 0; Mismatches
                                                  0; Indels
                                                                 0; Gaps
                                                                             0;
            2 VLR 4
Qу
              111
Db
            4 VLR 6
```

RESULT 36 AAU03884

```
ID
     AAU03884 standard; Peptide; 7 AA.
XX
AC
     AAU03884;
XX
DT
     12-SEP-2001
                 (first entry)
XX
     G protein-coupled receptor-like (GPCR-like) receptor binding peptide #54.
DE
XX
KW
     G protein-coupled receptor-like receptor; GPCR-like receptor; helminth;
     endoparasite; ectoparasite; invertebrate; insect; neurological disorder;
KW
KW
     neuromuscular disorder; human; nematode; lobster; locust; mollusc; leech;
KW
     fruitfly.
XX
OS
     Synthetic.
XX
PN
     WO200138533-A2.
XX
     31-MAY-2001.
PD
XX
     24-NOV-2000; 2000WO-US32225.
PF
XX
     24-NOV-1999;
                    99US-0167523.
PR
XX
PΑ
     (PHAA ) PHARMACIA & UPJOHN.
XX
PI
     Lowery DE, Geary TG, Kubiak TM, Larsen MJ;
XX
DR
     WPI; 2001-343952/36.
XX
     Using G-protein-coupled receptor (GPCR)-like receptors to identify
PT
PT
     candidate compounds for the treatment and prevention of invertebrate
PT
     parasites, especially helminths and insects -
XX
PS
     Claim 14; Page 56; 219pp; English.
XX
     The sequence represents a G protein-coupled receptor-like (GPCR-like)
CC
CC
     receptor protein. GPCR-like receptors and their associated nucleic acids
CC
     may be used to identify candidate compounds for their ability to modulate
CC
     the activity of GPCRs. The sequences therefore are useful for treating
CC
     and preventing infection by endoparasitic and ectoparasitic invertebrate
CC
     parasites, especially helminths and insects, and particularly ailments
CC
     related to aberrant neurological and neuromuscular function.
XX
SQ
     Sequence
                7 AA;
                          60.0%; Score 3; DB 22; Length 7;
  Query Match
                          100.0%; Pred. No. 9.3e+05;
  Best Local Similarity
  Matches
            3; Conservative 0; Mismatches
                                                 0; Indels
                                                                 0; Gaps
            2 VLR 4
QУ
              111
Db
            4 VLR 6
RESULT 37
888E0UAA
```

AAU03888 standard; Peptide; 7 AA.

```
XX
AC
     AAU03888;
XX
DΤ
     12-SEP-2001 (first entry)
XX
     G protein-coupled receptor-like (GPCR-like) receptor binding peptide #58.
DE
XX
KW
     G protein-coupled receptor-like receptor; GPCR-like receptor; helminth;
     endoparasite; ectoparasite; invertebrate; insect; neurological disorder;
KW
     neuromuscular disorder; human; nematode; lobster; locust; mollusc; leech;
KW
KW
     fruitfly.
XX
OS
     Synthetic.
XX
ΡN
     WO200138533-A2.
XX
PD
     31-MAY-2001.
XX
     24-NOV-2000; 2000WO-US32225.
ΡF
XX
PR
     24-NOV-1999;
                    99US-0167523.
XX
PΑ
     (PHAA ) PHARMACIA & UPJOHN.
XX
PΙ
     Lowery DE, Geary TG, Kubiak TM, Larsen MJ;
XX
DR
     WPI; 2001-343952/36.
XX
PT
     Using G-protein-coupled receptor (GPCR)-like receptors to identify
PT
     candidate compounds for the treatment and prevention of invertebrate
PT
     parasites, especially helminths and insects -
XX
PS
     Claim 14; Page 56; 219pp; English.
XX
CC
     The sequence represents a G protein-coupled receptor-like (GPCR-like)
CC
     receptor protein. GPCR-like receptors and their associated nucleic acids
CC
     may be used to identify candidate compounds for their ability to modulate
CC
     the activity of GPCRs. The sequences therefore are useful for treating
CC
     and preventing infection by endoparasitic and ectoparasitic invertebrate
CC
     parasites, especially helminths and insects, and particularly ailments
CC
     related to aberrant neurological and neuromuscular function.
XX
SQ
     Sequence
                7 AA;
  Query Match
                          60.0%; Score 3; DB 22; Length 7;
  Best Local Similarity
                          100.0%; Pred. No. 9.3e+05;
 Matches
            3; Conservative 0; Mismatches
                                                                 0; Gaps
                                                0; Indels
                                                                              0;
Qу
            2 VLR 4
              | | |
Db
            4 VLR 6
RESULT 38
AAU03889
ΙD
     AAU03889 standard; Peptide; 7 AA.
XX
```

```
AC
    AAU03889;
XX
DT
    12-SEP-2001
                 (first entry)
XX
    G protein-coupled receptor-like (GPCR-like) receptor binding peptide #59.
DE
XX
     G protein-coupled receptor-like receptor; GPCR-like receptor; helminth;
KW
     endoparasite; ectoparasite; invertebrate; insect; neurological disorder;
KW
KW
     neuromuscular disorder; human; nematode; lobster; locust; mollusc; leech;
KW
     fruitfly.
XX
OS
     Synthetic.
XX
ΡN
     WO200138533-A2.
XX
PD
     31-MAY-2001.
XX
     24-NOV-2000; 2000WO-US32225.
PF
XX
PR
     24-NOV-1999;
                    99US-0167523.
XX
PΑ
     (PHAA ) PHARMACIA & UPJOHN.
XX
PΙ
     Lowery DE, Geary TG, Kubiak TM, Larsen MJ;
XX
DR
     WPI: 2001-343952/36.
XX
PΤ
     Using G-protein-coupled receptor (GPCR)-like receptors to identify
     candidate compounds for the treatment and prevention of invertebrate
PT
     parasites, especially helminths and insects -
PT
XX
PS
     Claim 14; Page 56; 219pp; English.
XX
CC
     The sequence represents a G protein-coupled receptor-like (GPCR-like)
     receptor protein. GPCR-like receptors and their associated nucleic acids
CC
CC
     may be used to identify candidate compounds for their ability to modulate
CC
     the activity of GPCRs. The sequences therefore are useful for treating
     and preventing infection by endoparasitic and ectoparasitic invertebrate
CC
CC
     parasites, especially helminths and insects, and particularly ailments
CC
     related to aberrant neurological and neuromuscular function.
XX
SO
     Sequence
                7 AA;
                          60.0%; Score 3; DB 22; Length 7;
  Query Match
  Best Local Similarity
                          100.0%; Pred. No. 9.3e+05;
                                                 0; Indels
  Matches
            3; Conservative 0; Mismatches
                                                                 0; Gaps
            2 VLR 4
Qу
              +
            4 VLR 6
RESULT 39
AAB98053
     AAB98053 standard; peptide; 7 AA.
ID
XX
AC
     AAB98053;
```

```
XX
DT
     15-AUG-2001 (first entry)
XX
DE
     Rat endoproteinase peptide SEQ ID NO:6.
XX
KW
     Galactosaminoglycan 4-sulphate group transferase; G4ST; sulphate donor;
     N-acetylgalactosamine; galactosaminoglycan.
KW
XX
OS
     Rattus norvegicus.
XX
PN
     JP2001061481-A.
XX
     13-MAR-2001.
PD
XX
PF
     27-AUG-1999;
                  99JP-0241312.
XX
PR
                   99JP-0241312.
     27-AUG-1999;
XX
PΑ
     (SEGK ) SEIKAGAKU KOGYO CO LTD.
XX
DR WPI; 2001-294710/31.
XX
PT
     A DNA encoding sulfate group transferase cDNA can be used for a large
PT
     scale preparation of galactosaminoglycan 4-sulfate group transferase
PT
     (G4ST) -
XX
PS
     Example 1; Page 11; 23pp; Japanese.
XX
CC
     The present invention describes a galactosaminoglycan 4-sulphate group
CC
     transferase (G4ST) protein with an activity of transferring a sulphate
     group from a sulphate group donor to the 4-OH of N-acetylgalactosamine
CC
     residue contained in galactosaminoglycan. Polynucleotides encoding G4ST
CC
CC
     can be used for large scale preparation of G4ST. The present sequence
CC
     represents an endoproteinase peptide which is used in an example from
CC
     the present invention.
XX
SO
     Sequence
               7 AA;
  Query Match
                          60.0%; Score 3; DB 22; Length 7;
 Best Local Similarity 100.0%; Pred. No. 9.3e+05;
            3; Conservative
                               0; Mismatches
                                                  0; Indels
                                                                  0; Gaps
                                                                              0;
            2 VLR 4
Qу
              111
            5 VLR 7
RESULT 40
AAB88610
ΙD
     AAB88610 standard; Peptide; 7 AA.
XX
AC
     AAB88610;
XX
     23-MAY-2001 (first entry)
DT
XX
DE
     Human interleukin-6 receptor binding inhibitor #4.
XX
```

```
KW
     Interleukin-6; ligand; IL-6 receptor; antagonist; cancer; allergy;
KW
     rheumatoid arthritis; diabetes; multiple sclerosis; infection;
KW
     autoimmune disease; inflammatory disease.
XX
OS
     Synthetic.
XX
     WO200116166-A2.
ΡN
XX
PD
     08-MAR-2001.
XX
     25-AUG-2000; 2000WO-US23490.
PF
XX
PR
     27-AUG-1999;
                    99US-0151277.
XX
PΑ
     (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PΙ
     Saxinger C;
XX
DR
     WPI; 2001-244395/25.
XX
PΤ
     Polypeptides which inhibit the binding of interleukin (IL)-6 ligand
     with the IL-6 receptor, and the nucleic acids that encode them, useful
PT
PT
     for treating e.g. inflammation and autoimmune diseases -
XX
PS
     Claim 37; Page 6; 98pp; English.
XX
CC
     The present invention describes a number of peptides which are able to
CC
     bind to the human interleukin-6 (IL-6) receptor and inhibit IL-6 binding.
CC
     These are useful in the treatment of diseases associated with abnormal
CC
     IL-6 expression, including multiple myeloma, plasmacytoma, haematological
CC
     diseases such as plasma cell dyscrasias, leukaemia and lymphoma,
CC
     mesangial proliferative glomerulonephritis, polyclonal B cell activation
CC
     conditions, allergies, rheumatoid arthritis, diabetes, multiple
CC
     sclerosis, septic shock, infections, post-menopausal osteoporosis,
CC
     chronic immune deficiency, autoimmune diseases and inflammatory diseases.
XX
SO
     Sequence
               7 AA;
  Query Match
                          60.0%; Score 3; DB 22; Length 7;
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
  Matches
             3; Conservative 0; Mismatches
                                                 0; Indels
                                                                  0; Gaps
                                                                              0;
            2 VLR 4
Qу
              111
Db
            4 VLR 6
RESULT 41
AAB88800
ID
     AAB88800 standard; Peptide; 7 AA.
XX
AC
     AAB88800;
XX
DT
     23-MAY-2001 (first entry)
XX
DE
     Human interleukin-6 domain IV fragment #41.
XX
```

```
Interleukin-6; ligand; IL-6 receptor; antagonist; cancer; allergy;
 KW
KW
      rheumatoid arthritis; diabetes; multiple sclerosis; infection;
KW
     autoimmune disease; inflammatory disease.
XX
OS
     Homo sapiens.
XX
ΡN
     WO200116166-A2.
XX
     08-MAR-2001.
PD
XX
PF
     25-AUG-2000; 2000WO-US23490.
XX
PR
     27-AUG-1999;
                    99US-0151277.
XX
PΑ
     (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PΙ
     Saxinger C;
XX
DR
     WPI; 2001-244395/25.
XX
PT
     Polypeptides which inhibit the binding of interleukin (IL)-6 ligand
PT
     with the IL-6 receptor, and the nucleic acids that encode them, useful
PΤ
     for treating e.g. inflammation and autoimmune diseases -
XX
PS
     Example 4; Page 49; 98pp; English.
XX
CC
     The present invention describes a number of peptides which are able to
     bind to the human interleukin-6 (IL-6) receptor and inhibit IL-6 binding.
CC
CC
     These are useful in the treatment of diseases associated with abnormal
CC
     IL-6 expression, including multiple myeloma, plasmacytoma, haematological
CC
     diseases such as plasma cell dyscrasias, leukaemia and lymphoma,
CC
     mesangial proliferative glomerulonephritis, polyclonal B cell activation
CC
     conditions, allergies, rheumatoid arthritis, diabetes, multiple
CC
     sclerosis, septic shock, infections, post-menopausal osteoporosis,
CC
     chronic immune deficiency, autoimmune diseases and inflammatory diseases.
XX
SO
     Sequence 7 AA;
  Query Match
                          60.0%; Score 3; DB 22; Length 7;
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
  Matches
           3; Conservative 0; Mismatches
                                                 0; Indels
                                                                  0; Gaps
                                                                              0:
Qу
            2 VLR 4
              111
Db
            1 VLR 3
RESULT 42
AAB49848
ΙD
     AAB49848 standard; Peptide; 7 AA.
XX
AC
    AAB49848;
XX
DT
     02-MAR-2001 (first entry)
XX
    Human endostatin peptide fragment SEQ ID NO: 61.
DE
XX
```

```
KW
     Endostatin; antiangiogenic; angiogenesis; human; mouse; chicken;
KW
     cancer; inflammation; angiogenesis-dependent disease.
XX
OS
     Homo sapiens.
XX
PN
     WO200067771-A1.
XX
PD
     16-NOV-2000.
XX
PF
     02-MAY-2000; 2000WO-US12063.
XX
PR
     06-MAY-1999:
                    99US-0132907.
PR
     14-JUL-1999;
                    99US-0353333.
XX
PΑ
     (BURN-) BURNHAM INST.
XX
PΤ
     Vuori K;
XX
DR
     WPI; 2001-040937/05.
XX
PT
     Endostatin peptide comprising at least four endostatin amino acid
PΤ
     residues are e.g. angiogenesis inhibitors for treating cancer and
PT
     diabetic retinopathy -
XX
PS
     Disclosure; Page 134; 146pp; English.
XX
CC
     The present invention provides endostatin peptides which can be used in
CC
     the modulation of angiogenesis. This is useful in the treatment of
CC
     cancers, inflammation, rheumatoid arthritis, chronic articular
CC
     rheumatism, psoriasis, disorders associated with inopportune invasion of
CC
     vessels such as diabetic retinopathy, neovascular glaucoma, retinopathy
CC
     of prematurity, macular degeneration, corneal graft rejection,
     retrolental fibroplasia, rubeosis, capillary proliferation in
CC
CC
     atherosclerotic plaques and osteoporosis. Other angiogenesis-dependent
CC
     diseases include Osler-Webber syndrome, myocardial angiogenesis, plaque
CC
     neovasculisation, telangiectasia, haemophiliac joints and wound
     granulation. In addition, the peptides can be used as birth control
CC
CC
     agents.
XX
SQ
     Sequence
                7 AA;
                          60.0%; Score 3; DB 22; Length 7;
  Query Match
  Best Local Similarity
                          100.0%; Pred. No. 9.3e+05;
  Matches
           3; Conservative 0; Mismatches
                                                 0; Indels
                                                                 0; Gaps
                                                                              0;
Qу
            2 VLR 4
              111
            5 VLR 7
Db
RESULT 43
ABG77658
ID
     ABG77658 standard; Peptide; 7 AA.
XX
AC
     ABG77658;
XX
DΤ
     05-NOV-2002 (first entry)
```

```
XX
     Targetting peptide selective for human organ, tissue or cell type #191.
DE
XX
KW
     Human; cytostatic; antiinflammatory; antidiabetic; cardiovascular;
KW
     immunomodulator; antibacterial; antiviral; gene therapy; cancer;
KW
     arthritis; diabetes; inflammatory disease; atherosclerosis;
KW
     autoimmune disease; bacterial infection; viral infection;
KW
     cardiovascular disease; degenerative disease.
XX
OS
     Homo sapiens.
XX
PN
     WO200220723-A2.
XX
     14-MAR-2002.
PD
XX
PF
     07-SEP-2001; 2001WO-US28044.
XX
PR
     08-SEP-2000; 2000US-231266P.
PR
     17-JAN-2001; 2001US-0765101.
XX
PΑ
     (TEXA ) UNIV TEXAS SYSTEM.
XX
PΙ
     Arap W, Pasqualini R;
XX
DR
     WPI; 2002-599247/64.
XX
PT
     New targeting peptides identified by phage display, useful for treating
PT
     a disease state, e.g. cancer, diabetes, inflammatory disease,
PT
     atherosclerosis, autoimmune disease, bacterial or viral infection or
₽T
     cardiovascular disease
XX
PS
     Claim 16; Fig 2B; 269pp; English.
XX
CC
     The invention describes an isolated peptide of 100 amino acids or less
CC
     in size. The peptide is useful for treating a disease state, e.g. cancer,
CC
     arthritis, diabetes, inflammatory disease, atherosclerosis, autoimmune
     disease, bacterial infection, viral infection, cardiovascular disease
CC
CC
     or degenerative disease. This sequence represents a human targeting
CC
     peptide selective for human organs, tissues or cell types.
XX
SO
     Sequence
                7 AA;
  Query Match
                          60.0%; Score 3; DB 23; Length 7;
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
  Matches
          3; Conservative 0; Mismatches
                                                 0; Indels
                                                                 0; Gaps
                                                                              0;
Qу
            2 VLR 4
              Db
            5 VLR 7
RESULT 44
ABG77669
     ABG77669 standard; Peptide; 7 AA.
ΙD
XX
AC
     ABG77669;
XX
```

```
DT
     05-NOV-2002 (first entry)
XX
     Targetting peptide selective for human organ, tissue or cell type #202.
DΕ
XX
     Human; cytostatic; antiinflammatory; antidiabetic; cardiovascular;
KW
     immunomodulator; antibacterial; antiviral; gene therapy; cancer;
KW
     arthritis; diabetes; inflammatory disease; atherosclerosis;
KW
     autoimmune disease; bacterial infection; viral infection;
KW
KW
     cardiovascular disease; degenerative disease.
XX
OS
     Homo sapiens.
XX
ΡN
     WO200220723-A2.
XX
PD
     14-MAR-2002.
XX
ΡF
     07-SEP-2001; 2001WO-US28044.
XX
     08-SEP-2000; 2000US-231266P.
PR
PR
     17-JAN-2001; 2001US-0765101.
XX
     (TEXA ) UNIV TEXAS SYSTEM.
PΑ
XX
ΡI
     Arap W, Pasqualini R;
XX
DR
     WPI; 2002-599247/64.
XX
     New targeting peptides identified by phage display, useful for treating
PΤ
     a disease state, e.g. cancer, diabetes, inflammatory disease,
PT
     atherosclerosis, autoimmune disease, bacterial or viral infection or
PT
PT
     cardiovascular disease
XX
PS
     Claim 16; Fig 2B; 269pp; English.
XX
     The invention describes an isolated peptide of 100 amino acids or less
CC
CC
     in size. The peptide is useful for treating a disease state, e.g. cancer,
CC
     arthritis, diabetes, inflammatory disease, atherosclerosis, autoimmune
     disease, bacterial infection, viral infection, cardiovascular disease
CC
CC
     or degenerative disease. This sequence represents a human targeting
CC
     peptide selective for human organs, tissues or cell types.
XX
                7 AA;
SQ
     Sequence
                          60.0%; Score 3; DB 23; Length 7;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
  Matches
            3; Conservative 0; Mismatches
                                                 0; Indels
                                                                  0; Gaps
                                                                              0;
            2 VLR 4
Qу
              +11
            2 VLR 4
Db
RESULT 45
ABG77670
     ABG77670 standard; Peptide; 7 AA.
ΙD
XX
     ABG77670;
AC
```

```
XX
DT
     05-NOV-2002 (first entry)
XX
     Targetting peptide selective for human organ, tissue or cell type #203.
DE
XX
KW
     Human; cytostatic; antiinflammatory; antidiabetic; cardiovascular;
     immunomodulator; antibacterial; antiviral; gene therapy; cancer;
KW
     arthritis; diabetes; inflammatory disease; atherosclerosis;
KW
     autoimmune disease; bacterial infection; viral infection;
KW
     cardiovascular disease; degenerative disease.
KW
XX
OS
     Homo sapiens.
XX
ΡN
     W0200220723-A2.
XX
PD
     14-MAR-2002.
XX
PF
     07-SEP-2001; 2001WO-US28044.
XX
     08-SEP-2000; 2000US-231266P.
PR
PR
     17-JAN-2001; 2001US-0765101.
XX
PΑ
     (TEXA ) UNIV TEXAS SYSTEM.
XX
PΤ
     Arap W, Pasqualini R;
XX
DR
     WPI; 2002-599247/64.
XX
PT
     New targeting peptides identified by phage display, useful for treating
PT
     a disease state, e.g. cancer, diabetes, inflammatory disease,
PΤ
     atherosclerosis, autoimmune disease, bacterial or viral infection or
PΤ
     cardiovascular disease
XX
PS
     Claim 16; Fig 2B; 269pp; English.
XX
     The invention describes an isolated peptide of 100 amino acids or less
CC
     in size. The peptide is useful for treating a disease state, e.g. cancer,
CC
CC
     arthritis, diabetes, inflammatory disease, atherosclerosis, autoimmune
     disease, bacterial infection, viral infection, cardiovascular disease
CC
     or degenerative disease. This sequence represents a human targeting
CC
CC
     peptide selective for human organs, tissues or cell types.
XX
SO
     Sequence 7 AA;
  Query Match
                          60.0%; Score 3; DB 23; Length 7;
  Best Local Similarity
                          100.0%; Pred. No. 9.3e+05;
            3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                              0;
Qу
            2 VLR 4
              Db
            4 VLR 6
RESULT 46
ABG77675
    ABG77675 standard; Peptide; 7 AA.
ID
XX
```

```
AC
     ABG77675;
XX
DT
     05-NOV-2002 (first entry)
XX
     Targetting peptide selective for human organ, tissue or cell type #208.
DE
XX
     Human; cytostatic; antiinflammatory; antidiabetic; cardiovascular;
KW
     immunomodulator; antibacterial; antiviral; gene therapy; cancer;
KW
     arthritis; diabetes; inflammatory disease; atherosclerosis;
KW
     autoimmune disease; bacterial infection; viral infection;
KW
KW
     cardiovascular disease; degenerative disease.
XX
OS
     Homo sapiens.
XX
PN
     WO200220723-A2.
XX
PD
     14-MAR-2002.
XX
     07-SEP-2001; 2001WO-US28044.
PF
XX
     08-SEP-2000; 2000US-231266P.
PR
PR
     17-JAN-2001; 2001US-0765101.
XX
     (TEXA ) UNIV TEXAS SYSTEM.
PΑ
XX
PΙ
     Arap W, Pasqualini R;
XX
DR
     WPI; 2002-599247/64.
XX
     New targeting peptides identified by phage display, useful for treating
PT
PΤ
     a disease state, e.g. cancer, diabetes, inflammatory disease,
     atherosclerosis, autoimmune disease, bacterial or viral infection or
PT
PT
     cardiovascular disease
XX
PS
     Claim 16; Fig 2B; 269pp; English.
XX
CC
     The invention describes an isolated peptide of 100 amino acids or less
CC
     in size. The peptide is useful for treating a disease state, e.g. cancer,
     arthritis, diabetes, inflammatory disease, atherosclerosis, autoimmune
CC
CC
     disease, bacterial infection, viral infection, cardiovascular disease
CC
     or degenerative disease. This sequence represents a human targeting
CC
     peptide selective for human organs, tissues or cell types.
XX
SQ
     Sequence
                7 AA;
                          60.0%; Score 3; DB 23; Length 7;
  Query Match
                          100.0%; Pred. No. 9.3e+05;
  Best Local Similarity
            3; Conservative 0; Mismatches 0; Indels
  Matches
                                                                 0; Gaps
            2 VLR 4
Qу
              111
Db
            4 VLR 6
RESULT 47
```

AA017318

ID AA017318 standard; Peptide; 7 AA.

```
XX
AC
     AAO17318;
XX
DT
     08-JUL-2002 (first entry)
XX
DE
     A thaliana receptor kinase RKS13 peptide fragment.
XX
     Vegetative propagation; plant; phytochrome; receptor kinase-like SERK;
KW
KW
     RKS.
XX
OS
     Arabidopsis thaliana.
XX
PN
     EP1094113-A1.
XX
PD
     25-APR-2001.
XX
ΡF
     22-OCT-1999; 99EP-0203480.
XX
PR
     22-OCT-1999; 99EP-0203480.
XX
PΑ
     (GENE-) GENETWISTER TECHNOLOGIES BV.
XX
PΙ
     Schmidt EDL, Van Der Kop DAM, De Boer AD;
XX
DR
     WPI; 2002-228902/29.
XX
PΤ
     In vitro culture propagation of a plant from plant starting material,
     comprises stimulating root/shoot initiation by introducing a
PT
PΤ
     recombinant gene product into the starting material, thus reducing
PΤ
     phytochrome addition to culture
XX
PS
     Disclosure; Page 112; 171pp; English.
XX
CC
     The present invention relates to a culture method for propagating a plant
CC
     from a plant starting material, where root or shoot initiation is
CC
     stimulated by introducing a gene into the starting material which allows
     the reduction or absence of phytochrome addition to the culture. The
CC
CC
     method is used for the propagation (preferably, seedless propagation) of
CC
     a plant from a plant starting material in an in vitro culture method.
     Nucleic acids encoding receptor-like kinases are useful in the method.
CC
     The present sequence is a fragment of a receptor-like kinase protein.
CC
XX
SO
     Sequence 7 AA;
  Query Match
                          60.0%; Score 3; DB 23; Length 7;
  Best Local Similarity
                          100.0%; Pred. No. 9.3e+05;
            3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
Qу
            2 VLR 4
              111
Db
           4 VLR 6
RESULT 48
AAU79912
    AAU79912 standard; Peptide; 7 AA.
ID
XX
```

```
AC
    AAU79912;
XX
DT
     02-JUL-2002 (first entry)
XX
DE
    Cassette mutagenesis wild-type pATP003.xb restriction site peptide #3.
XX
KW
     2,5-diketo-D-gluconic acid reductase A enzyme; cofactor specificity site;
KW
     cofactor dependency; metabolically engineered organism; enzyme;
KW
     2-keto-L-gluconic acid; glucose; single fermentation step;
KW
     cassette mutagenesis; restriction site; pATP003.xb.
XX
OS
     Synthetic.
XX
PN
     WO200222527-A2.
XX
     21-MAR-2002.
PD
XX
PF
     11-SEP-2001; 2001WO-US28366.
XX
PR
     11-SEP-2000; 2000US-0658645.
XX
     (RUTF ) UNIV RUTGERS STATE NEW JERSEY.
PA
XX
PΙ
     Anderson S, Banta S;
XX
DR
     WPI; 2002-351864/38.
DR
     N-PSDB; ABK49072, ABK49073.
XX
PΤ
     Making mutant 2,5-diketo-D-qluconic acid reductase enzymes with altered
     cofactor dependency, for producing 2-keto-L-gluconic acid from glucose
PT
PT
     in one fermentation step, comprises mutating a cofactor specificity
PT
     site amino acid -
XX
PS
     Example 1; Page 34; 45pp; English.
XX
CC
     The present invention relates to a new method of producing mutant
CC
     2,5-diketo-D-gluconic acid reductase enzymes with altered cofactor
CC
     dependency. The method of the invention involves identifying a cofactor
CC
     specificity site in a wild type 2,5-diketo-D-gluconic acid reductase
CC
     enzyme and mutating an amino acid in the identified cofactor specificity
CC
     site so that cofactor dependency of reactions catalysed by the enzyme is
CC
     altered. The method is useful for producing mutant 2,5-diketo-D-gluconic
CC
     acid reductase enzymes with altered cofactor dependency and as such is
CC
     useful in metabolically engineered organisms to produce 2-keto-L-gluconic
CC
     acid from glucose in a single fermentation step. The mutant 2,5-diketo-D-
CC
     gluconic acid reductase enzyme produces 2-keto-L-gluconic acid from
CC
     glucose in a single fermentation step in metabolically engineered
CC
     organisms. Flexibility in catalysing the enzymatic reaction by the enzyme
CC
     with NADH or nonspecifically with NADH (reduced nicotinamide adenine
CC
     dinucleotide) or NADPH provides advantages. Since the cost of NADPH is an
CC
     order of magnitude greater than that of NADH, use of the enzyme of the
```

invention in any in vitro system where cofactor must be purchased and

provided for the enzymes provides a significant cost saving advantage.

production of 2-keto-L-gluconic acid. The present amino acid sequence

levels of apparent expression which leads to an increased rate of

The mutant 2,5-diketo-D-gluconic acid reductase enzyme exhibits increased

represent the cassette mutagenesis wild-type pATP003.xb restriction site

CC

CC

CC

CC

CC

CC

```
CC
      peptide #3. This sequence was used in the methods of the invention for
CC
     cassette mutagenesis.
XX
SQ
     Sequence 7 AA;
  Query Match
                           60.0%; Score 3; DB 23; Length 7;
  Best Local Similarity
                           100.0%; Pred. No. 9.3e+05;
            3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                              0;
Qу
            2 VLR 4
              +111
Db
            3 VLR 5
RESULT 49
AAU80624
ΙD
     AAU80624 standard; peptide; 7 AA.
XX
AC
     AAU80624;
XX
     26-MAR-2002 (first entry)
\mathsf{DT}
XX
     Javelin peptide #54 for conjugation to multi-component viral particles.
DE
XX
     Immunogenic complex; non-pathogenic multi-component viral particle;
KW
     javelin; heat shock protein; humoral immunity; cellular immunity;
KW
     anti-viral immune response; viral infection; hepatitis; influenza;
KW
     mumps; HIV infection; human immunodeficiency virus; polio;
KW
KW
     tick-borne encephalitis; ebola virus infection.
XX
0S
     Synthetic.
XX
PN
     WO200178772-A1.
XX
PD
     25-OCT-2001.
XX
PF
     17-APR-2001; 2001WO-US12568.
XX
PR
     17-APR-2000; 2000US-197462P.
XX
PΑ
     (MOJA-) MOJAVE THERAPEUTICS INC.
XX
PΙ
     Hoe M, Landsberger F;
XX
DR
     WPI; 2002-049177/06.
XX
PΤ
     New heat shock protein-based viral vaccines, useful for enhancing
PT
     anti-viral immune response in an organism, particularly as a vaccine
     for preventing or ameliorating viral infections, e.g. hepatitis,
PT
PΤ
     influenza or HIV infection -
XX
PS
     Disclosure; Page 11; 75pp; English.
XX
CC
     The present invention relates to the use of an immunogenic complex,
     comprising a non-pathogenic multi-component viral particle covalently
CC
     linked to a javelin molecule (preferably a peptide) that selectively
CC
    binds to a heat shock protein. The immunogenic complex is useful for
CC
```

```
CC
     inducing both humoral and cellular immunity, especially for enhancing
CC
     the anti-viral immune response, in a human or non-human subject. The
CC
     immunogenic complex is particularly useful as a vaccine for preventing
CC
     or ameliorating viral infections, e.g. hepatitis, influenza, mumps,
CC
     HIV (human immunodeficiency virus) infection, polio, tick-borne
CC
     encephalitis or ebola virus infection. AAU80571-AAU80734 represent
CC
     javelin peptides which may be covalently conjugated to multi-component
CC
    viral particles.
XX
SQ
    Sequence
                7 AA;
  Query Match
                          60.0%; Score 3; DB 23; Length 7;
  Best Local Similarity 100.0%; Pred. No. 9.3e+05;
 Matches
           3; Conservative 0; Mismatches
                                                                 0; Gaps
                                                 0; Indels
                                                                              0;
            2 VLR 4
Qу
              Db
            4 VLR 6
RESULT 50
AAU80668
ΙD
    AAU80668 standard; peptide; 7 AA.
XX
AC
    AAU80668;
XX
\mathsf{DT}
     26-MAR-2002 (first entry)
XX
DΕ
     Javelin peptide #98 for conjugation to multi-component viral particles.
XX
KW
     Immunogenic complex; non-pathogenic multi-component viral particle;
     javelin; heat shock protein; humoral immunity; cellular immunity;
KW
KW
     anti-viral immune response; viral infection; hepatitis; influenza;
KW
     mumps; HIV infection; human immunodeficiency virus; polio;
KW
     tick-borne encephalitis; ebola virus infection.
XX
OS
     Synthetic.
XX
PN
    WO200178772-A1.
XX
PD
     25-OCT-2001.
XX
PF
     17-APR-2001; 2001WO-US12568.
XX
PR
     17-APR-2000; 2000US-197462P.
XX
PΑ
     (MOJA-) MOJAVE THERAPEUTICS INC.
XX
PΙ
    Hoe M, Landsberger F;
XX
DR
    WPI; 2002-049177/06.
XX
PΤ
    New heat shock protein-based viral vaccines, useful for enhancing
PΤ
     anti-viral immune response in an organism, particularly as a vaccine
PT
     for preventing or ameliorating viral infections, e.g. hepatitis,
PΤ
     influenza or HIV infection -
XX
```

```
PS
     Disclosure; Page 12; 75pp; English.
XX
CC
     The present invention relates to the use of an immunogenic complex,
     comprising a non-pathogenic multi-component viral particle covalently
CC
    linked to a javelin molecule (preferably a peptide) that selectively
CC
CC
     binds to a heat shock protein. The immunogenic complex is useful for
     inducing both humoral and cellular immunity, especially for enhancing
CC
CC
    the anti-viral immune response, in a human or non-human subject. The
CC
     immunogenic complex is particularly useful as a vaccine for preventing
    or ameliorating viral infections, e.g. hepatitis, influenza, mumps,
CC
    HIV (human immunodeficiency virus) infection, polio, tick-borne
CC
CC
    encephalitis or ebola virus infection. AAU80571-AAU80734 represent
CC
    javelin peptides which may be covalently conjugated to multi-component
CC
    viral particles.
XX
SQ
    Sequence 7 AA;
 Query Match
                         60.0%; Score 3; DB 23; Length 7;
 Best Local Similarity 100.0%; Pred. No. 9.3e+05;
 Matches
           3; Conservative 0; Mismatches 0; Indels
                                                               0; Gaps
           2 VLR 4
Qу
             Db
           5 VLR 7
```

Search completed: November 28, 2003, 15:40:44 Job time : 43 secs

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OM protein - protein search, using sw model

Run on: November 28, 2003, 15:39:25; Search time 22 Seconds

(without alignments)

9.616 Million cell updates/sec

Title: US-09-228-866-46

Perfect score: 5

Sequence: 1 XVLRX 5

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Gapop 60.0 , Gapext 60.0

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Post-processing: Listing first 100 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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2	3	60.0	5	1	US-08-469-569-165	Sequence 165, App
3	3	60.0	5	1	US-08-249-322A-165	Sequence 165, App
4	3	60.0	5	1	US-08-469-526A-165	Sequence 165, App
5	3	60.0	5	2	US-08-734-591A-165	Sequence 165, App
6	3	60.0	5	2	US-08-469-660-165	Sequence 165, App
7	3	60.0	5	2	US-08-850-910A-13	Sequence 13, Appl
8	3	60.0	5	2	US-08-850-910A-49	Sequence 49, Appl
9	3	60.0	5	2	US-08-484-905-122	Sequence 122, App
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11	3	60.0	5	3	US-08-954-915A-41	Sequence 41, Appl

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                                                        Sequence 85, Appl
                     12 4 US-09-832-230A-85
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                                                       Sequence 85, Appl
                      12 5 PCT-US96-09809-47
12 6 5164482-15
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         3 60.0
                                                        Sequence 47, Appl
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                                                      Patent No. 5164482
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                                                        Sequence 10, Appl
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ALIGNMENTS

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RESULT 1
US-08-036-555B-165
; Sequence 165, Application US/08036555B
; Patent No. 5530109
  GENERAL INFORMATION:
    APPLICANT: Goodearl, Andrew; Stroobant, Paul;
    APPLICANT: Minghetti, Luisa; Waterfield, Michael; Marchioni, Mark;
    APPLICANT: Chen, Maio Su; Hiles, Ian
    TITLE OF INVENTION: Glial Mitogenic Factors, Their
    TITLE OF INVENTION: Preparation and Use
    NUMBER OF SEQUENCES: 184
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Felfe & Lynch
      STREET: 805 Third Avenue
      CITY: New York City
      STATE: New York
      COUNTRY: USA
      ZIP: 10022
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Diskette, 5.25 inch, 360 kb storage
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COMPUTER: IBM
       OPERATING SYSTEM: PC-DOS
       SOFTWARE: Wordperfect
     CURRENT APPLICATION DATA:
     APPLICATION NUMBER: US/08/036,555B
       FILING DATE: 24-MAR-1993
      CLASSIFICATION: 435
   PRIOR APPLICATION DATA:
     APPLICATION NUMBER: 07/965,173
      FILING DATE: 23-OCT-1992
   PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 07/940,389
      FILING DATE: 03-SEP-1992
   PRIOR APPLICATION DATA:
     APPLICATION NUMBER: 07/907,138
      FILING DATE: 30-JUN-1992
    PRIOR APPLICATION DATA:
     APPLICATION NUMBER: 07/863,703
      FILING DATE: 03-APRIL-1992
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: U.K. 91 07566.3
      FILING DATE: 10-APRIL-1991
    ATTORNEY/AGENT INFORMATION:
      NAME: Tsai, Christine H.
      REGISTRATION NUMBER: 34,266
      REFERENCE/DOCKET NUMBER: LUD 5250.4
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (212) 688-9200
      TELEFAX: (212) 838-3884
   INFORMATION FOR SEQ ID NO: 165:
   SEQUENCE CHARACTERISTICS:
      LENGTH: 5
      TYPE: amino acid
      STRANDEDNESS:
      TOPOLOGY: linear
    FEATURE:
      OTHER INFORMATION: Xaa in position 1 is unknown.
US-08-036-555B-165
  Query Match
                         60.0%; Score 3; DB 1; Length 5;
 Best Local Similarity 100.0%; Pred. No. 2.5e+05;
 Matches
          3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                          0:
Qу
           2 VLR 4
             Db
           3 VLR 5
RESULT 2
US-08-469-569-165
; Sequence 165, Application US/08469569
; Patent No. 5606032
  GENERAL INFORMATION:
    APPLICANT: Goodearl, Andrew; Stroobant, Paul;
    APPLICANT: Minghetti, Luisa; Waterfield, Michael; Marchioni, Mark;
    APPLICANT: Chen, Maio Su; Hiles, Ian
    TITLE OF INVENTION: Glial Mitogenic Factors, Their
```

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TITLE OF INVENTION: Preparation and Use
    NUMBER OF SEQUENCES: 184
    CORRESPONDENCE ADDRESS:
     ADDRESSEE: Felfe & Lynch
      STREET: 805 Third Avenue
      CITY: New York City
      STATE: New York
      COUNTRY: USA
      ZIP: 10022
   COMPUTER READABLE FORM:
     MEDIUM TYPE: Diskette, 5.25 inch, 360 kb storage
      COMPUTER: IBM
      OPERATING SYSTEM: PC-DOS
      SOFTWARE: Wordperfect
   CURRENT APPLICATION DATA:
    APPLICATION NUMBER: US/08/469,569
     FILING DATE: 06-JUN-1995
      CLASSIFICATION: 530
   PRIOR APPLICATION DATA:
     APPLICATION NUMBER: 08/036,555
      FILING DATE: 24-MAR-1993
      APPLICATION NUMBER: 07/965,173
      FILING DATE: 23-OCT-1992
   PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 07/940,389
     FILING DATE: 03-SEP-1992
    PRIOR APPLICATION DATA:
    APPLICATION NUMBER: 07/907,138
     FILING DATE: 30-JUN-1992
   PRIOR APPLICATION DATA:
     APPLICATION NUMBER: 07/863,703
     FILING DATE: 03-APRIL-1992
   PRIOR APPLICATION DATA:
      APPLICATION NUMBER: U.K. 91 07566.3
      FILING DATE: 10-APRIL-1991
   ATTORNEY/AGENT INFORMATION:
     NAME: Tsai, Christine H.
      REGISTRATION NUMBER: 34,266
     REFERENCE/DOCKET NUMBER: LUD 5250.4
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (212) 688-9200
      TELEFAX: (212) 838-3884
  INFORMATION FOR SEQ ID NO: 165:
    SEQUENCE CHARACTERISTICS:
     LENGTH: 5
      TYPE: amino acid
      STRANDEDNESS:
      TOPOLOGY: linear
    FEATURE:
      OTHER INFORMATION: Xaa in position 1 is unknown.
US-08-469-569-165
 Query Match
                        60.0%; Score 3; DB 1; Length 5;
 Best Local Similarity 100.0%; Pred. No. 2.5e+05;
 Matches 3; Conservative 0; Mismatches 0; Indels 0; Gaps
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RESULT 3
US-08-249-322A-165
; Sequence 165, Application US/08249322A
; Patent No. 5716930
   GENERAL INFORMATION:
     APPLICANT: Goodearl, Andrew; Stroobant, Paul;
     APPLICANT: Minghetti, Luisa; Waterfield, Michael; Marchioni, Mark;
     APPLICANT: Chen, Maio Su; Hiles, Ian
     TITLE OF INVENTION: Glial Mitogenic Factors, Their
     TITLE OF INVENTION: Preparation and Use
     NUMBER OF SEQUENCES: 184
     CORRESPONDENCE ADDRESS:
      ADDRESSEE: Felfe & Lynch
       STREET: 805 Third Avenue
      CITY: New York City
      STATE: New York
      COUNTRY: USA
      ZIP: 10022
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Diskette, 5.25 inch, 360 kb storage
                 IBM
       COMPUTER:
      OPERATING SYSTEM: PC-DOS
       SOFTWARE: Wordperfect
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/249,322A
      FILING DATE: 26-MAY-1994
      CLASSIFICATION: 435
     PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 08/036,555
      FILING DATE: 24-MAR-1993
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 07/965,173
      FILING DATE: 23-OCT-1992
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 07/940,389
      FILING DATE: 03-SEP-1992
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 07/907,138
      FILING DATE:
                    30-JUN-1992
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 07/863,703
      FILING DATE: 03-APRIL-1992
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: U.K. 91 07566.3
      FILING DATE: 10-APRIL-1991
    ATTORNEY/AGENT INFORMATION:
      NAME: Tsai, Christine H.
      REGISTRATION NUMBER: 34,266
      REFERENCE/DOCKET NUMBER: LUD 250.4
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (212) 688-9200
      TELEFAX: (212) 838-3884
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INFORMATION FOR SEQ ID NO: 165:

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SEQUENCE CHARACTERISTICS:
      LENGTH: 5
       TYPE: amino acid
       STRANDEDNESS:
      TOPOLOGY: linear
    FEATURE:
      OTHER INFORMATION: Xaa in position 1 is unknown.
US-08-249-322A-165
 Query Match
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 Best Local Similarity 100.0%; Pred. No. 2.5e+05;
          3; Conservative 0; Mismatches 0; Indels
 Matches
                                                                0; Gaps
                                                                            0:
Qу
           2 VLR 4
             \perp \mid \cdot \mid \cdot \mid
Db
           3 VLR 5
RESULT 4
US-08-469-526A-165
; Sequence 165, Application US/08469526A
; Patent No. 5792849
  GENERAL INFORMATION:
    APPLICANT: Goodearl, Andrew
    APPLICANT: Stroobant, Paul
    APPLICANT: Minghetti, Luisa
    APPLICANT: Waterfield, Michael
    APPLICANT: Marchionni, Mark
    APPLICANT: Chen, Maio Su
    APPLICANT: Hiles, Ian
    TITLE OF INVENTION: GLIAL MITOGENIC FACTORS, THEIR
    TITLE OF INVENTION: PREPARATION AND USE
    NUMBER OF SEQUENCES: 187
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Clark & Elbing LLP
      STREET: 176 Federal Street
      CITY: Boston
      STATE: MA
      COUNTRY: USA
      ZIP: 02110
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Diskette
      COMPUTER: IBM Compatible
      OPERATING SYSTEM: DOS
      SOFTWARE: FastSEQ for Windows Version 2.0
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/469,526A
      FILING DATE: 06 June 1995
      CLASSIFICATION: 435
    PRIOR APPLICATION DATA:
     APPLICATION NUMBER: 08/036,555
      FILING DATE: 24-MAR-1993
     APPLICATION NUMBER: 07/965,173
     FILING DATE: 23-OCT-1992
     APPLICATION NUMBER: 07/940,389
     FILING DATE: 03-SEP-1992
     APPLICATION NUMBER: 07/907,138
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FILING DATE: 03-JUN-1992
       APPLICATION NUMBER: 07/863,703
       FILING DATE: 03-APRIL-1992
       APPLICATION NUMBER: U.K. 91 07566.3
       FILING DATE: 10-APR-1991
   ATTORNEY/AGENT INFORMATION:
      NAME: Bieker-Brady, Kristina
       REGISTRATION NUMBER: 39,109
       REFERENCE/DOCKET NUMBER: 04585/00200A
     TELECOMMUNICATION INFORMATION:
       TELEPHONE: 617-428-0200
       TELEFAX: 617-428-7045
   INFORMATION FOR SEQ ID NO: 165:
     SEQUENCE CHARACTERISTICS:
      LENGTH: 5
       TYPE: amino acid
       STRANDEDNESS: single
       TOPOLOGY: linear
     FEATURE:
      OTHER INFORMATION: Xaa in position 1 is unknown.
US-08-469-526A-165
  Query Match
                         60.0%; Score 3; DB 1; Length 5;
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
  Matches
          3; Conservative 0; Mismatches 0; Indels
                                                               0; Gaps
Oy
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             111
Db
           3 VLR 5
RESULT 5
US-08-734-591A-165
; Sequence 165, Application US/08734591A
; Patent No. 5854220
  GENERAL INFORMATION:
    APPLICANT: Goodearl, Andrew
    APPLICANT: Stroobant, Paul
    APPLICANT: Minghetti, Luisa
    APPLICANT: Waterfield, Michael
    APPLICANT: Hiles, Ian
    APPLICANT: Marchionni, Mark
    APPLICANT: Chen, Mario
    TITLE OF INVENTION: GLIAL MITOGENIC FACTORS, THEIR
    TITLE OF INVENTION: PREPARATION AND USE
    NUMBER OF SEQUENCES: 187
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Clark & Elbing LLP
      STREET: 176 Federal Street
      CITY: Boston
      STATE: Massachusetts
      COUNTRY: U.S.A.
      ZIP: 02110
    COMPUTER READABLE FORM:
      MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
      COMPUTER: IBM Compatible Pentium
     OPERATING SYSTEM: Windows95
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SOFTWARE: WordPerfect (Version 7.0)
     CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/734,591A
       FILING DATE: 22-OCT-1996
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     PRIOR APPLICATION DATA:
     APPLICATION NUMBER: 08/470,335
      FILING DATE: 06-JUN-1995
   PRIOR APPLICATION DATA:
     APPLICATION NUMBER: 08/036,555
      FILING DATE: 03-MAR-1993
   PRIOR APPLICATION DATA:
     APPLICATION NUMBER: 07/965,173
      FILING DATE: 23-OCT-1992
    PRIOR APPLICATION DATA:
     APPLICATION NUMBER: 07/940,389
      FILING DATE: 03-SEP-1992
     PRIOR APPLICATION DATA:
     APPLICATION NUMBER: 07/907.138
      FILING DATE: 30-JUN-1992
    PRIOR APPLICATION DATA:
     APPLICATION NUMBER: 07/863,703
       FILING DATE: 03-APR-1992
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: UK 91 07566.3
      FILING DATE: 10-APR-1991
   ATTORNEY/AGENT INFORMATION:
     NAME: Bieker-Brady, Kristina
      REGISTRATION NUMBER: 39,109
      REFERENCE/DOCKET NUMBER: 04585/00200P
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (617) 428-0200
      TELEFAX: (617) 428-7045
      TELEX:
  INFORMATION FOR SEO ID NO: 165:
   SEQUENCE CHARACTERISTICS:
      LENGTH: 5
      TYPE: amino acid
      STRANDEDNESS:
      TOPOLOGY: linear
    FEATURE:
      OTHER INFORMATION: Xaa in position 1 is unknown.
US-08-734-591A-165
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                         60.0%; Score 3; DB 2; Length 5;
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
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           2 VLR 4
Qу
             3 VLR 5
RESULT 6
US-08-469-660-165
; Sequence 165, Application US/08469660
; Patent No. 5876973
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GENERAL INFORMATION:
     APPLICANT: Gwynne, David I.; Marchionni, Mark:
     APPLICANT: McBurney, Robert N.
     TITLE OF INVENTION: INHIBITORS OF CELL PROLIFERATION.
     TITLE OF INVENTION: THEIR PREPARATION AND USE
     NUMBER OF SEQUENCES: 184
     CORRESPONDENCE ADDRESS:
      ADDRESSEE: Fish & Richardson
       STREET: 225 Franklin Street
       CITY: Boston
       STATE: Massachusetts
       ZIP: 0211-2804
    COMPUTER READABLE FORM:
       MEDIUM TYPE: Diskette, 5.25 inch, 360 kb storage
       COMPUTER: IBM
       OPERATING SYSTEM: PC-DOS
       SOFTWARE: Wordperfect
     CURRENT APPLICATION DATA:
     APPLICATION NUMBER: US/08/469,660
      FILING DATE:
      CLASSIFICATION: 435
     PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 08/011,396
      FILING DATE: 29-JAN-1993
    PRIOR APPLICATION DATA: ·
      APPLICATION NUMBER: 07/984,085
      FILING DATE: 01-DEC-1992
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 07/951,747
       FILING DATE: 25-SEP-1992
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 07/927,337
       FILING DATE: 10-AUG-1992
    ATTORNEY/AGENT INFORMATION:
      NAME: Clark, Paul T.
       REGISTRATION NUMBER: 30,162
      REFERENCE/DOCKET NUMBER: 04585/017004
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (617) 542-5070
       TELEFAX: 200154
   INFORMATION FOR SEQ ID NO: 165:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 5
      TYPE: amino acid
      STRANDEDNESS:
      TOPOLOGY: linear
    FEATURE:
      OTHER INFORMATION: Xaa in position 1 is unknown.
US-08-469-660-165
  Query Match
                         60.0%; Score 3; DB 2; Length 5;
 Best Local Similarity 100.0%; Pred. No. 2.5e+05;
          3; Conservative 0; Mismatches
                                              0; Indels 0; Gaps
                                                                        0;
           2 VLR 4
Qу
            Db
           3 VLR 5
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RESULT 7
US-08-850-910A-13
; Sequence 13, Application US/08850910A
; Patent No. 5948761
  GENERAL INFORMATION:
    APPLICANT: SEILHAMER, J.J.
    APPLICANT: LEWICKI, J.
    APPLICANT: SCARBOROUGH, R.M.
    TITLE OF INVENTION: RECOMBINANT TECHNIQUES FOR
    TITLE OF INVENTION: PRODUCTION OF BRAIN NATRIUETIC PEPTIDE
    NUMBER OF SEQUENCES: 50
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: MORRISON & FOERSTER, LLP
      STREET: 2000 Pennsylvania Avenue, NW, Suite 5500
      CITY: Washington
      STATE: DC
     COUNTRY: USA
      ZIP: 20006-1888
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Diskette
      COMPUTER: IBM Compatible
      OPERATING SYSTEM: Windows
      SOFTWARE: FastSEQ for Windows Version 2.0b
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/850,910A
      FILING DATE: 05-MAY-1997
      CLASSIFICATION: 435
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 07/477,226
      FILING DATE: 08-FEB-1990
     APPLICATION NUMBER: 07/299,880
     FILING DATE: 19-JAN-1989
     APPLICATION NUMBER: 07/206,470
      FILING DATE: 14-JUN-1988
      APPLICATION NUMBER: 07/200,383
      FILING DATE: 31-MAY-1988
   ATTORNEY/AGENT INFORMATION:
      NAME: Murashige, Kate H
      REGISTRATION NUMBER: 29,959
      REFERENCE/DOCKET NUMBER: 219002025212
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 202-887-1500
      TELEFAX: 202-822-0168
      TELEX:
  INFORMATION FOR SEQ ID NO: 13:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 5 amino acids
      TYPE: amino acid
      STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
    FEATURE:
      NAME/KEY: Other
      LOCATION: 1
      OTHER INFORMATION: Amino Acid is Asn or Lys.
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NAME/KEY: Other
      LOCATION: 5
      OTHER INFORMATION: Amino Acid is Arg or Lys.
US-08-850-910A-13
  Query Match
                        60.0%; Score 3; DB 2; Length 5;
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
           3; Conservative 0; Mismatches 0; Indels
                                                             0; Gaps
                                                                          0;
Qу
           2 VLR 4
             Db
           2 VLR 4
RESULT 8
US-08-850-910A-49
; Sequence 49, Application US/08850910A
; Patent No. 5948761
  GENERAL INFORMATION:
    APPLICANT: SEILHAMER, J.J.
    APPLICANT: LEWICKI, J.
    APPLICANT: SCARBOROUGH, R.M.
    TITLE OF INVENTION: RECOMBINANT TECHNIQUES FOR
    TITLE OF INVENTION: PRODUCTION OF BRAIN NATRIUETIC PEPTIDE
    NUMBER OF SEQUENCES: 50
    CORRESPONDENCE ADDRESS:
     ADDRESSEE: MORRISON & FOERSTER, LLP
     STREET: 2000 Pennsylvania Avenue, NW, Suite 5500
      CITY: Washington
      STATE: DC
     COUNTRY: USA
      ZIP: 20006-1888
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Diskette
      COMPUTER: IBM Compatible
      OPERATING SYSTEM: Windows
      SOFTWARE: FastSEQ for Windows Version 2.0b
   CURRENT APPLICATION DATA:
    APPLICATION NUMBER: US/08/850,910A
     FILING DATE: 05-MAY-1997
     CLASSIFICATION: 435
   PRIOR APPLICATION DATA:
    APPLICATION NUMBER: 07/477,226
     FILING DATE: 08-FEB-1990
     APPLICATION NUMBER: 07/299,880
     FILING DATE: 19-JAN-1989
     APPLICATION NUMBER: 07/206,470
     FILING DATE: 14-JUN-1988
      APPLICATION NUMBER: 07/200,383
      FILING DATE: 31-MAY-1988
   ATTORNEY/AGENT INFORMATION:
     NAME: Murashige, Kate H
     REGISTRATION NUMBER: 29,959
     REFERENCE/DOCKET NUMBER: 219002025212
   TELECOMMUNICATION INFORMATION:
    TELEPHONE: 202-887-1500
      TELEFAX: 202-822-0168
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TELEX:
   INFORMATION FOR SEQ ID NO: 49:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 5 amino acids
       TYPE: amino acid
       STRANDEDNESS: single
       TOPOLOGY: linear
US-08-850-910A-49
  Query Match
                         60.0%; Score 3; DB 2; Length 5;
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
 Matches 3; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
Qу
            2 VLR 4
             \parallel \parallel \parallel
Db
            2 VLR 4
RESULT 9
US-08-484-905-122
; Sequence 122, Application US/08484905
; Patent No. 5976551
  GENERAL INFORMATION:
    APPLICANT: Mottez, Estelle
    APPLICANT: Abastado, Jean-Pierre
    APPLICANT: Kourilsky, Philippe
    TITLE OF INVENTION: An Altered Major Histocompatibility
    TITLE OF INVENTION: Complex(MHC) Determinant and Methods for Using the
    TITLE OF INVENTION: Determinant
    NUMBER OF SEQUENCES: 127
    CORRESPONDENCE ADDRESS:
     ADDRESSEE: Finnegan, Henderson, Farabow, Garrett &
     ADDRESSEE: Dunner
     STREET: 1300 I Street, N.W., Suite 700
      CITY: Washington
      STATE: D.C.
      ZIP: 20005-3315
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy Disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS-/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/484,905
      FILING DATE: 07-JUNE-1995
      CLASSIFICATION: 530
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 07/801,818
      FILING DATE: 05-DEC-1991
      CLASSIFICATION: 530
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 07/792,473
      FILING DATE: 15-NOV-1991
     CLASSIFICATION: 530
    ATTORNEY/AGENT INFORMATION:
     NAME: Potter, Jane E. R.
      REGISTRATION NUMBER: 33,332
```

```
REFERENCE/DOCKET NUMBER: 03495.0106-03000
     TELECOMMUNICATION INFORMATION:
      TELEPHONE: 202-408-4000
       TELEFAX: 202-408-4400
  INFORMATION FOR SEQ ID NO: 122:
   SEQUENCE CHARACTERISTICS:
     LENGTH: 5 amino acids
      TYPE: amino acid
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-08-484-905-122
  Query Match
                         60.0%; Score 3; DB 2; Length 5;
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
  Matches
           3; Conservative 0; Mismatches 0; Indels
                                                            0; Gaps
                                                                          0;
Qу
           2 VLR 4
             111
Db
           1 VLR 3
RESULT 10
US-08-481-985B-122
; Sequence 122, Application US/08481985B
; Patent No. 6011146
; GENERAL INFORMATION:
    APPLICANT: Mottez, Estelle
    APPLICANT: Abastado, Jean-Pierre
    APPLICANT: Kourilsky, Phillipe
    TITLE OF INVENTION: Altered Major Histocompatibility Complex
    TITLE OF INVENTION:
    NUMBER OF SEQUENCES: 148
   CORRESPONDENCE ADDRESS:
     ADDRESSEE: Finnegan, Henderson, Farabow, Garrett &
      ADDRESSEE: Dunner
      STREET: 1300 I Street, N.W., Suite 700
      CITY: Washington
      STATE: D.C.
     ZIP: 20005-3315
   COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
    APPLICATION NUMBER: US/08/481,985B
      FILING DATE: 07-JUN-1995
     CLASSIFICATION: 435
   PRIOR APPLICATION DATA:
     APPLICATION NUMBER: US 07/801,818
      FILING DATE: 05-DEC-1991
     CLASSIFICATION: 435
   PRIOR APPLICATION DATA:
     APPLICATION NUMBER: US 07/792,473
     FILING DATE: 15-NOV-1991
     CLASSIFICATION: 435
   ATTORNEY/AGENT INFORMATION:
```

```
NAME: Meyers, Kenneth J.
       REGISTRATION NUMBER: 25,146
       REFERENCE/DOCKET NUMBER: 03495.0106-04000
     TELECOMMUNICATION INFORMATION:
       TELEPHONE: 202-408-4000
       TELEFAX: 202-408-4400
  INFORMATION FOR SEQ ID NO: 122:
    SEQUENCE CHARACTERISTICS:
       LENGTH: 5 amino acids
       TYPE: amino acid
       TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-08-481-985B-122
  Query Match
                         60.0%; Score 3; DB 3; Length 5;
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
            3; Conservative 0; Mismatches 0; Indels
                                                             0; Gaps
                                                                           0;
            2 VLR 4
Qу
             | | | |
           1 VLR 3
RESULT 11
US-08-954-915A-41
; Sequence 41, Application US/08954915A
; Patent No. 6028055
  GENERAL INFORMATION:
    APPLICANT: Lowe, David
    APPLICANT: Schoenfeld, Jill
    TITLE OF INVENTION: Receptor Selective BNP
    NUMBER OF SEQUENCES: 52
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Genentech, Inc.
      STREET: 1 DNA Way
      CITY: South San Francisco
      STATE: California
      COUNTRY: USA
      ZIP: 94080
    COMPUTER READABLE FORM:
      MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: WinPatin (Genentech)
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/954,915A
      FILING DATE: 21-Oct-1997
      CLASSIFICATION: 514
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 60/028854
      FILING DATE: 22-Oct-1996
    ATTORNEY/AGENT INFORMATION:
      NAME: Kubinec, Jeffrey S.
      REGISTRATION NUMBER: 36,575
      REFERENCE/DOCKET NUMBER: P1017R1
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 650/225-8228
```

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TELEFAX: 650/952-9881
   INFORMATION FOR SEQ ID NO: 41:
     SEQUENCE CHARACTERISTICS:
       LENGTH: 5 amino acids
       TYPE: Amino Acid
       TOPOLOGY: Linear
US-08-954-915A-41
  Query Match
                          60.0%; Score 3; DB 3; Length 5;
  Best Local Similarity
                          100.0%; Pred. No. 2.5e+05;
  Matches
            3; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
                                                                            0;
Qу
            2 VLR 4
              | \cdot |
Db
            2 VLR 4
RESULT 12
US-08-470-335-165
; Sequence 165, Application US/08470335F
; Patent No. 6147190
; GENERAL INFORMATION:
  APPLICANT: GOODEARL, ANDREW
; APPLICANT: STROOBANT, PAUL
; APPLICANT: MINGHETTI, LUISA
; APPLICANT: WATERFIELD, MICHAEL
  APPLICANT: MARCHIONNI, MARK
 APPLICANT: CHEN, MARIO S.
  APPLICANT: HILES, IAN
   TITLE OF INVENTION: GLIAL MITOGENIC FACTORS, THEIR
  TITLE OF INVENTION: PREPARATION AND USE
  FILE REFERENCE: 04585/00200B
  CURRENT APPLICATION NUMBER: US/08/470,335F
  CURRENT FILING DATE: 1995-06-06
  EARLIER APPLICATION NUMBER: 08/036,555
  EARLIER FILING DATE: 1993-03-24
  NUMBER OF SEQ ID NOS: 252
  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 165
   LENGTH: 5
   TYPE: PRT
   ORGANISM: Bos taurus
   FEATURE:
   NAME/KEY: VARIANT
   LOCATION: (1)...(1)
    OTHER INFORMATION: Xaa in position 1 is Lys or Arg.
US-08-470-335-165
 Query Match
                         60.0%; Score 3; DB 3; Length 5;
 Best Local Similarity 100.0%; Pred. No. 2.5e+05;
 Matches
           3; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
                                                                            0;
           2 VLR 4
Qу
             Db
           3 VLR 5
```

```
RESULT 13
US-08-370-476-122
; Sequence 122, Application US/08370476
 ; Patent No. 6153408
 ; GENERAL INFORMATION:
     APPLICANT: Mottez, Estelle
     APPLICANT: Abastado, Jean-Pierre
     APPLICANT: Kourilsky, Phillipe
     APPLICANT: Lone, Yu-Chun
     APPLICANT: Ojcius, David
     APPLICANT: Casrouge, Armanda
     TITLE OF INVENTION: Altered Major Histocompatibility Complex
     TITLE OF INVENTION:
     NUMBER OF SEQUENCES: 127
     CORRESPONDENCE ADDRESS:
      ADDRESSEE: Finnegan, Henderson, Farabow, Garrett &
       ADDRESSEE: Dunner
      STREET: 1300 I Street, N.W., Suite 700
      CITY: Washington
     STATE: D.C.
      ZIP: 20005-3315
    COMPUTER READABLE FORM:
       MEDIUM TYPE: Floppy disk
       COMPUTER: IBM PC compatible
       OPERATING SYSTEM: PC-DOS/MS-DOS
       SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/370,476
      FILING DATE:
      CLASSIFICATION: 435
    PRIOR APPLICATION DATA:
     APPLICATION NUMBER: US 08/117,575
      FILING DATE: 07-SEP-1993
      APPLICATION NUMBER: US 08/072,787
       FILING DATE: 06-JUN-1993
    PRIOR APPLICATION DATA:
       APPLICATION NUMBER: US 07/801,818
       FILING DATE: 05-DEC-1991
    PRIOR APPLICATION DATA:
       APPLICATION NUMBER: US 07/792,473
       FILING DATE: 15-NOV-1991
    ATTORNEY/AGENT INFORMATION:
      NAME: Meyers, Kenneth J.
       REGISTRATION NUMBER: 25,146
      REFERENCE/DOCKET NUMBER: 05243.0001-01000
    TELECOMMUNICATION INFORMATION:
       TELEPHONE: 202-408-4000
      TELEFAX: 202-408-4400
   INFORMATION FOR SEO ID NO:
                             122:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 5 amino acids
      TYPE: amino acid
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-08-370-476-122
```

```
Best Local Similarity 100.0%; Pred. No. 2.5e+05;
           3; Conservative 0; Mismatches 0; Indels 0; Gaps
  Matches
                                                                           0;
            2 VLR 4
Qу
              Db
            1 VLR 3
RESULT 14
US-08-735-021-165
; Sequence 165, Application US/08735021B
; Patent No. 6194377
; GENERAL INFORMATION:
; APPLICANT: GOODEARL, ANDREW
; APPLICANT: STROOBANT, PAUL
  APPLICANT: MINGHETTI, LUISA
  APPLICANT: WATERFIELD, MICHAEL
; APPLICANT: MARCHIONNI, MARK
; APPLICANT: CHEN, MARIO S.
; APPLICANT: HILES, IAN
  TITLE OF INVENTION: GLIAL MITOGENIC FACTORS, THEIR
  TITLE OF INVENTION: PREPARATION AND USE
; FILE REFERENCE: 04585/00200L
; CURRENT APPLICATION NUMBER: US/08/735,021B
; CURRENT FILING DATE: 1996-10-22
  EARLIER APPLICATION NUMBER: 08/472,065
  EARLIER FILING DATE: 1995-06-06
  EARLIER APPLICATION NUMBER: 08/036,555
  EARLIER FILING DATE: 1993-03-24
  EARLIER APPLICATION NUMBER: 07/965,173
  EARLIER FILING DATE: 1992-10-23
; EARLIER APPLICATION NUMBER: 07/940,389
; EARLIER FILING DATE: 1992-09-03
; EARLIER APPLICATION NUMBER: 07/907,138
  EARLIER FILING DATE: 1992-06-30
  EARLIER APPLICATION NUMBER: 07/863,703
; EARLIER FILING DATE: 1992-04-03
; NUMBER OF SEQ ID NOS: 192
  SOFTWARE: FastSEQ for Windows Version 3.0
; SEQ ID NO 165
   LENGTH: 5
   TYPE: PRT
   ORGANISM: Homo sapiens
   FEATURE:
   NAME/KEY: UNSURE
   LOCATION: (1)...(1)
   OTHER INFORMATION: Xaa in 1 is unknown.
US-08-735-021-165
 Query Match
                         60.0%; Score 3; DB 3; Length 5;
 Best Local Similarity 100.0%; Pred. No. 2.5e+05;
 Matches
          3; Conservative 0; Mismatches 0; Indels
                                                               0; Gaps
                                                                        0;
Qу
           2 VLR 4
             3 VLR 5
Dh
```

```
RESULT 15
US-08-734-664A-165
; Sequence 165, Application US/08734664A
; Patent No. 6204241
  GENERAL INFORMATION:
    APPLICANT: Goodearl, Andrew
    APPLICANT: Stroobant, Paul
    APPLICANT: Minghetti, Luisa
    APPLICANT: Waterfield, Michael
    APPLICANT: Marchionni, Mark
    APPLICANT: Chen, Mario
    APPLICANT: Hiles, Ian
    TITLE OF INVENTION: GLIAL MITOGENIC FACTORS, THEIR
    TITLE OF INVENTION: PREPARATION AND USE
    NUMBER OF SEQUENCES: 187
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Clark & Elbing LLP
      STREET: 176 Federal Street
      CITY: Boston
      STATE: Massachusetts
      COUNTRY: U.S.A.
      ZIP: 02110
    COMPUTER READABLE FORM:
      MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
      COMPUTER: IBM Compatible Pentium
      OPERATING SYSTEM: Windows 95
      SOFTWARE: FastSeq Version 2.0
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/734,664A
      FILING DATE: 22-OCT-1996
      CLASSIFICATION: 536
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 08/249,322
      FILING DATE: 26-MAY-1994
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 08/036,555
      FILING DATE: 24-MAR-1993
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 07/965,173
      FILING DATE: 23-OCT-1992
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 07/940,389
      FILING DATE: 03-SEP-1992
    PRIOR APPLICATION DATA:
     APPLICATION NUMBER: 07/907,138
      FILING DATE: 30-JUN-1992
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 07/863,703
      FILING DATE: 03-APR-1992
    PRIOR APPLICATION DATA:
     APPLICATION NUMBER: UK 91 07566.3
     FILING DATE: 10-APR-1991
   ATTORNEY/AGENT INFORMATION:
     NAME: Bieker-Brady, Kristina
     REGISTRATION NUMBER: 39,109
     REFERENCE/DOCKET NUMBER: 04585/00200J
```

```
TELECOMMUNICATION INFORMATION:
       TELEPHONE: (617) 428-0200
       TELEFAX: (617) 428-7045
       TELEX:
  INFORMATION FOR SEQ ID NO: 165:
   SEQUENCE CHARACTERISTICS:
       LENGTH: 5
       TYPE: amino acid
       STRANDEDNESS:
       TOPOLOGY: linear
     FEATURE:
      OTHER INFORMATION: Xaa in position 1 is unknown.
US-08-734-664A-165
  Query Match
                         60.0%; Score 3; DB 3; Length 5;
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
           3; Conservative 0; Mismatches 0; Indels
                                                             0; Gaps
                                                                            0;
            2 VLR 4
Qу
             3 VLR 5
RESULT 16
US-08-470-339-165
; Sequence 165, Application US/08470339C
; Patent No. 6232286
; GENERAL INFORMATION:
  APPLICANT: GOODEARL, ANDREW
  APPLICANT: STROOBANT, PAUL
; APPLICANT: MINGHETTI, LUISA
; APPLICANT: WATERFIELD, MICHAEL
; APPLICANT: MARCHIONNI, MARK
 APPLICANT: CHEN, MARIO S.
  APPLICANT: HILES, IAN
  TITLE OF INVENTION: GLIAL MITOGENIC FACTORS, THEIR
  TITLE OF INVENTION: PREPARATION AND USE
; FILE REFERENCE: 04585/002008
  CURRENT APPLICATION NUMBER: US/08/470,339C
  CURRENT FILING DATE: 1995-06-06
 EARLIER APPLICATION NUMBER: 08/036,555
  EARLIER FILING DATE: 1993-03-24
  EARLIER APPLICATION NUMBER: 07/940,389
  EARLIER FILING DATE: 1992-09-03
  EARLIER APPLICATION NUMBER: 07/907,138
  EARLIER FILING DATE: 1992-06-30
  EARLIER APPLICATION NUMBER: 07/863,703
  EARLIER FILING DATE: 1992-04-03
  EARLIER APPLICATION NUMBER: 91 07566.3 GB
  EARLIER FILING DATE: 1999-04-10
 NUMBER OF SEQ ID NOS: 226
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEO ID NO 165
  LENGTH: 5
   TYPE: PRT
   ORGANISM: Bos taurus
 FEATURE:
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NAME/KEY: VARIANT
    LOCATION: (1)...(1)
    OTHER INFORMATION: Xaa in position 1 is Lys or Arg.
US-08-470-339-165
  Query Match
                          60.0%; Score 3; DB 3; Length 5;
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
           3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
Qу·
            2 VLR 4
              Db
            3 VLR 5
RESULT 17
US-09-463-129B-4
; Sequence 4, Application US/09463129B
; Patent No. 6410024
; GENERAL INFORMATION:
; APPLICANT: BURNIE, James P
; APPLICANT: MATTHEWS, Ruth C
  TITLE OF INVENTION: Epitopes of Shigella Like Toxin and Their Use as a TITLE OF INVENTION: Vaccine and in Diagnosis
; FILE REFERENCE: 264666
; CURRENT APPLICATION NUMBER: US/09/463,129B
; CURRENT FILING DATE: 2000-01-20
; PRIOR APPLICATION NUMBER: GB 9715177.3
; PRIOR FILING DATE: 1997-07-21
  PRIOR APPLICATION NUMBER: PCT/GB98/02156
; PRIOR FILING DATE: 1998-07-17
; NUMBER OF SEQ ID NOS: 14
 SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 4
   LENGTH: 5
    TYPE: PRT
    ORGANISM: Escherichia coli
US-09-463-129B-4
  Query Match
                          60.0%; Score 3; DB 4; Length 5;
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
  Matches
          3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0:
Qу
            2 VLR 4
              111
Db
            3 VLR 5
RESULT 18
US-08-467-602-165
; Sequence 165, Application US/08467602C
; Patent No. 6444642
; GENERAL INFORMATION:
; APPLICANT: Sklar, Robert
; APPLICANT: Marchionni, Mark
  APPLICANT: Gwynne, David I.
  TITLE OF INVENTION: METHODS FOR TREATING MUSCLE DISEASES AND
  TITLE OF INVENTION: DISORDERS
```

```
; FILE REFERENCE: 04585/028003
  CURRENT APPLICATION NUMBER: US/08/467,602C
  CURRENT FILING DATE: 1995-06-06
  EARLIER APPLICATION NUMBER: 08/209,204
; EARLIER FILING DATE: 1994-03-08
; EARLIER APPLICATION NUMBER: 08/059,022
; EARLIER FILING DATE: 1993-05-06
; NUMBER OF SEQ ID NOS: 420
  SOFTWARE: FastSEQ for Windows Version 4.0
; SEO ID NO 165
  LENGTH: 5
  TYPE: PRT
  ORGANISM: Bos taurus
  FEATURE:
  NAME/KEY: VARIANT
   LOCATION: (1)...(1)
   OTHER INFORMATION: Xaa in position 1 is Lys or Arg.
US-08-467-602-165
 Query Match
                         60.0%; Score 3; DB 4; Length 5;
 Best Local Similarity 100.0%; Pred. No. 2.5e+05;
 Matches
           3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                           0;
Qу
           2 VLR 4
             Db
           3 VLR 5
RESULT 19
PCT-US94-05083C-161
; Sequence 161, Application PC/TUS9405083C
  GENERAL INFORMATION:
    APPLICANT: Robert Sklar, Mark Marchionni,
    APPLICANT: David I. Gwynne
    TITLE OF INVENTION: METHODS FOR ALTERING
    TITLE OF INVENTION: MUSCLE CONDITION
    NUMBER OF SEQUENCES: 185
    CORRESPONDENCE ADDRESS:
     ADDRESSEE: Fish & Richardson
      STREET: 225 Franklin Street
     CITY: Boston
      STATE: Massachusetts
      ZIP: 02110-2804
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Diskette, 5.25 inch, 360
      MEDIUM TYPE: kb storage
      COMPUTER: IBM
      OPERATING SYSTEM: PC-DOS
      SOFTWARE: Wordperfect
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: PCT/US94/05083C
      FILING DATE: 06-MAY-94
      CLASSIFICATION:
    PRIOR APPLICATION DATA:
     APPLICATION NUMBER: 08/209,204
      FILING DATE: 08-MAR-94
    PRIOR APPLICATION DATA:
```

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APPLICATION NUMBER: 08/059,022
       FILING DATE: 06-May-93
     ATTORNEY/AGENT INFORMATION:
      NAME: Clark, Paul T.
      REGISTRATION NUMBER: 30,162
     REFERENCE/DOCKET NUMBER: 04585/028W01
    TELECOMMUNICATION INFORMATION:
       TELEPHONE: (617) 542-5070
       TELEFAX: (617) 542-8906
       TELEX: 200154
   INFORMATION FOR SEQ ID NO: 161:
   SEQUENCE CHARACTERISTICS:
      LENGTH: 5
      TYPE: amino acid
      STRANDEDNESS:
      TOPOLOGY: linear
    FEATURE:
      OTHER INFORMATION: Xaa in position 1 is
      OTHER INFORMATION: unknown.
PCT-US94-05083C-161
                         60.0%; Score 3; DB 5; Length 5;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
 Matches
           3; Conservative 0; Mismatches
                                               0; Indels 0; Gaps
QУ
           2 VLR 4
              Db
           3 VLR 5
RESULT 20
PCT-US95-06846A-165
; Sequence 165, Application PC/TUS9506846A
  GENERAL INFORMATION:
    APPLICANT: Goodearl, Andrew David; Stroobant, Paul;
    APPLICANT: Minghetti, Luisa; Waterfield, Michael; Marchioni, Mark;
    APPLICANT: Chen, Maio Su; Hiles, Ian
    TITLE OF INVENTION: Glial Mitogenic Factors, Their
    TITLE OF INVENTION: Preparation and Use
    NUMBER OF SEQUENCES: 178
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Felfe & Lynch
      STREET: 805 Third Avenue
     CITY: New York City
     STATE: New York
     COUNTRY: USA
      ZIP: 10022
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Diskette, 5.25 inch, 360 kb storage
      COMPUTER: IBM
      OPERATING SYSTEM: PC-DOS
      SOFTWARE: Wordperfect
    CURRENT APPLICATION DATA:
     APPLICATION NUMBER: PCT/US95/06846A
     FILING DATE: 25-MAY-1995
    PRIOR APPLICATION DATA:
    APPLICATION NUMBER: 08/249,322
```

```
FILING DATE: 26-MAY-1994
       CLASSIFICATION:
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: 08/036,555
       FILING DATE: 24-MAR-1993
     PRIOR APPLICATION DATA:
     APPLICATION NUMBER: 07/965,173
       FILING DATE: 23-OCT-1992
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: 07/940,389
       FILING DATE: 03-SEP-1992
     PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 07/907,138
       FILING DATE: 30-JUN-1992
     PRIOR APPLICATION DATA:
       APPLICATION NUMBER: 07/863,703
       FILING DATE: 03-APRIL-1992
     PRIOR APPLICATION DATA:
     APPLICATION NUMBER: U.K. 91 07566.3
      FILING DATE: 10-APRIL-1991
    ATTORNEY/AGENT INFORMATION:
      NAME: Hanson, Norman D.
       REGISTRATION NUMBER: 30,946
       REFERENCE/DOCKET NUMBER: LUD 5250.5
     TELECOMMUNICATION INFORMATION:
       TELEPHONE: (212) 688-9200
       TELEFAX: (212) 838-3884
   INFORMATION FOR SEQ ID NO: 165:
     SEQUENCE CHARACTERISTICS:
       LENGTH: 5
       TYPE: amino acid
       STRANDEDNESS:
      TOPOLOGY: linear
     FEATURE:
      OTHER INFORMATION: Xaa in position 1 is unknown.
PCT-US95-06846A-165
  Query Match
                         60.0%; Score 3; DB 5; Length 5;
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
  Matches
          3; Conservative 0; Mismatches 0; Indels
                                                               0; Gaps
                                                                           0;
Qу
           2 VLR 4
             Db
           3 VLR 5
RESULT 21
US-08-850-910A-14
; Sequence 14, Application US/08850910A
; Patent No. 5948761
  GENERAL INFORMATION:
    APPLICANT: SEILHAMER, J.J.
    APPLICANT: LEWICKI, J.
    APPLICANT: SCARBOROUGH, R.M.
    TITLE OF INVENTION: RECOMBINANT TECHNIQUES FOR
    TITLE OF INVENTION: PRODUCTION OF BRAIN NATRIUETIC PEPTIDE
    NUMBER OF SEQUENCES: 50
```

```
CORRESPONDENCE ADDRESS:
       ADDRESSEE: MORRISON & FOERSTER, LLP
       STREET: 2000 Pennsylvania Avenue, NW, Suite 5500
       CITY: Washington
      STATE: DC
      COUNTRY: USA
      ZIP: 20006-1888
   COMPUTER READABLE FORM:
     MEDIUM TYPE: Diskette
       COMPUTER: IBM Compatible
       OPERATING SYSTEM: Windows
       SOFTWARE: FastSEQ for Windows Version 2.0b
   CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/850,910A
      FILING DATE: 05-MAY-1997
      CLASSIFICATION: 435
   PRIOR APPLICATION DATA:
     APPLICATION NUMBER: 07/477,226
     FILING DATE: 08-FEB-1990
     APPLICATION NUMBER: 07/299,880
     FILING DATE: 19-JAN-1989
     APPLICATION NUMBER: 07/206,470
      FILING DATE: 14-JUN-1988
     APPLICATION NUMBER: 07/200,383
      FILING DATE: 31-MAY-1988
   ATTORNEY/AGENT INFORMATION:
      NAME: Murashige, Kate H
      REGISTRATION NUMBER: 29,959
      REFERENCE/DOCKET NUMBER: 219002025212
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 202-887-1500
      TELEFAX: 202-822-0168
      TELEX:
  INFORMATION FOR SEQ ID NO: 14:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 6 amino acids
      TYPE: amino acid
      STRANDEDNESS: single
      TOPOLOGY: linear
   MOLECULE TYPE: peptide
   FEATURE:
      NAME/KEY: Other
      LOCATION: 1
     OTHER INFORMATION: Amino Acid is Asn or Lys.
     NAME/KEY: Other
     LOCATION: 5
      OTHER INFORMATION: Amino Acid is Arg or Lys.
      NAME/KEY: Other
      LOCATION: 6
      OTHER INFORMATION: Amino Acid is Tyr or His.
US-08-850-910A-14
 Query Match
                        60.0%; Score 3; DB 2; Length 6;
 Best Local Similarity 100.0%; Pred. No. 2.5e+05;
         3; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Matches
```

```
RESULT 22
US-08-850-910A-16
; Sequence 16, Application US/08850910A
; Patent No. 5948761
  GENERAL INFORMATION:
    APPLICANT: SEILHAMER, J.J.
    APPLICANT: LEWICKI, J.
    APPLICANT: SCARBOROUGH, R.M.
    TITLE OF INVENTION: RECOMBINANT TECHNIQUES FOR
    TITLE OF INVENTION:
                         PRODUCTION OF BRAIN NATRIUETIC PEPTIDE
    NUMBER OF SEQUENCES: 50
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: MORRISON & FOERSTER, LLP
      STREET: 2000 Pennsylvania Avenue, NW, Suite 5500
      CITY: Washington
      STATE: DC
      COUNTRY: USA
      ZIP: 20006-1888
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Diskette
      COMPUTER: IBM Compatible
      OPERATING SYSTEM: Windows
      SOFTWARE: FastSEQ for Windows Version 2.0b
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/850,910A
      FILING DATE: 05-MAY-1997
      CLASSIFICATION: 435
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 07/477,226
      FILING DATE: 08-FEB-1990
      APPLICATION NUMBER: 07/299,880
      FILING DATE: 19-JAN-1989
     APPLICATION NUMBER: 07/206,470
     FILING DATE: 14-JUN-1988
     APPLICATION NUMBER: 07/200,383
      FILING DATE: 31-MAY-1988
    ATTORNEY/AGENT INFORMATION:
      NAME: Murashige, Kate H
      REGISTRATION NUMBER: 29,959
      REFERENCE/DOCKET NUMBER: 219002025212
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 202-887-1500
      TELEFAX: 202-822-0168
      TELEX:
  INFORMATION FOR SEQ ID NO:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 6 amino acids
      TYPE: amino acid
      STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-08-850-910A-16
```

```
Query Match
                         60.0%; Score 3; DB 2; Length 6;
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
 Matches
           3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                          0;
Qу
           2 VLR 4
            - 111
Db
           2 VLR 4
RESULT 23
US-08-850-910A-50
; Sequence 50, Application US/08850910A
; Patent No. 5948761
  GENERAL INFORMATION:
    APPLICANT: SEILHAMER, J.J.
    APPLICANT: LEWICKI, J.
    APPLICANT: SCARBOROUGH, R.M.
    TITLE OF INVENTION: RECOMBINANT TECHNIQUES FOR
    TITLE OF INVENTION: PRODUCTION OF BRAIN NATRIUETIC PEPTIDE
    NUMBER OF SEQUENCES: 50
   CORRESPONDENCE ADDRESS:
     ADDRESSEE: MORRISON & FOERSTER, LLP
      STREET: 2000 Pennsylvania Avenue, NW, Suite 5500
      CITY: Washington
      STATE: DC
     COUNTRY: USA
      ZIP: 20006-1888
   COMPUTER READABLE FORM:
      MEDIUM TYPE: Diskette
      COMPUTER: IBM Compatible
      OPERATING SYSTEM: Windows
      SOFTWARE: FastSEQ for Windows Version 2.0b
   CURRENT APPLICATION DATA:
     APPLICATION NUMBER: US/08/850,910A
     FILING DATE: 05-MAY-1997
      CLASSIFICATION: 435
   PRIOR APPLICATION DATA:
    APPLICATION NUMBER: 07/477,226
     FILING DATE: 08-FEB-1990
     APPLICATION NUMBER: 07/299,880
     FILING DATE: 19-JAN-1989
     APPLICATION NUMBER: 07/206,470
     FILING DATE: 14-JUN-1988
     APPLICATION NUMBER: 07/200,383
     FILING DATE: 31-MAY-1988
   ATTORNEY/AGENT INFORMATION:
     NAME: Murashige, Kate H
      REGISTRATION NUMBER: 29,959
      REFERENCE/DOCKET NUMBER: 219002025212
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 202-887-1500
      TELEFAX: 202-822-0168
      TELEX:
 INFORMATION FOR SEQ ID NO: 50:
    SEQUENCE CHARACTERISTICS:
    LENGTH: 6 amino acids
     TYPE: amino acid
```

```
STRANDEDNESS: single
       TOPOLOGY: linear
     MOLECULE TYPE: peptide
US-08-850-910A-50
  Query Match
                         60.0%; Score 3; DB 2; Length 6;
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
           3; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
                                                                           0;
QУ
            2 VLR 4
             \perp
Db
            2 VLR 4
RESULT 24
US-08-482-228-179
; Sequence 179, Application US/08482228
; Patent No. 5968753
  GENERAL INFORMATION:
    APPLICANT: Tseng-Law, Janet
    APPLICANT: Kobori, Joan A.
    APPLICANT: Al-Abdaly, Fahad A.
    APPLICANT: Guillermo, Roy
    APPLICANT: Helgerson, Sam L.
    APPLICANT: Deans, Robert J.
    TITLE OF INVENTION: POSITIVE AND POSITIVE/NEGATIVE CELL
    TITLE OF INVENTION: SELECTION MEDIATED BY PEPTIDE RELEASE
    NUMBER OF SEQUENCES: 215
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Janice Guthrie, Ph.D.
      STREET: P.O. Box 15210
     CITY: Irvine
     STATE: California
     COUNTRY: USA
      ZIP: 92713-5210
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/482,228
      FILING DATE: 07-JUN-1995
      CLASSIFICATION: 435
    ATTORNEY/AGENT INFORMATION:
      NAME: Guthrie, Janice
      REGISTRATION NUMBER: 35,170
      REFERENCE/DOCKET NUMBER: IT-4630CIP3
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (714) 440-5353
      TELEFAX: (714) 553-1952
  INFORMATION FOR SEQ ID NO: 179:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 6 amino acids
      TYPE: amino acid
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
```

```
US-08-482-228-179
  Query Match
                          60.0%; Score 3; DB 2; Length 6;
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
           3; Conservative 0; Mismatches 0; Indels
                                                               0; Gaps
Qу
            2 VLR 4
             Db
            2 VLR 4
RESULT 25
US-08-482-528-179
; Sequence 179, Application US/08482528
; Patent No. 6017719
   GENERAL INFORMATION:
     APPLICANT: Tseng-Law, Janet
     APPLICANT: Kobori, Joan A.
     APPLICANT: Al-Abdaly, Fahad A.
     APPLICANT: Guillermo, Roy
     APPLICANT: Helgerson, Sam L.
     APPLICANT: Deans, Robert J.
     TITLE OF INVENTION: POSITIVE AND POSITIVE/NEGATIVE CELL
    TITLE OF INVENTION: SELECTION MEDIATED BY PEPTIDE RELEASE
    NUMBER OF SEQUENCES: 215
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Janice Guthrie, Ph.D.
      STREET: P.O. Box 15210
     CITY: Irvine
     STATE: California
     COUNTRY: USA
ZIP: 92713-5210
    COMPUTER READABLE FORM:
     MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/482,528
      FILING DATE: 07-JUN-1995
      CLASSIFICATION: 435
    ATTORNEY/AGENT INFORMATION:
      NAME: Guthrie, Janice
      REGISTRATION NUMBER: 35,170
      REFERENCE/DOCKET NUMBER: IT-4630CIP4
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (714) 440-5353
      TELEFAX: (714) 553-1952
  INFORMATION FOR SEQ ID NO: 179:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 6 amino acids
      TYPE: amino acid
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-08-482-528-179
```

60.0%; Score 3; DB 3; Length 6;

Query Match

```
Best Local Similarity 100.0%; Pred. No. 2.5e+05;
  Matches
           3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                          0;
Qу
            2 VLR 4
              | | |
Db
            2 VLR 4
RESULT 26
US-08-954-915A-33
; Sequence 33, Application US/08954915A
; Patent No. 6028055
; GENERAL INFORMATION:
     APPLICANT: Lowe, David
     APPLICANT: Schoenfeld, Jill
     TITLE OF INVENTION: Receptor Selective BNP
     NUMBER OF SEQUENCES: 52
    CORRESPONDENCE ADDRESS:
     ADDRESSEE: Genentech, Inc.
     STREET: 1 DNA Way
      CITY: South San Francisco
      STATE: California
      COUNTRY: USA
      ZIP: 94080
   COMPUTER READABLE FORM:
     MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: WinPatin (Genentech)
    CURRENT APPLICATION DATA:
     APPLICATION NUMBER: US/08/954,915A
      FILING DATE: 21-Oct-1997
      CLASSIFICATION: 514
   PRIOR APPLICATION DATA:
     APPLICATION NUMBER: 60/028854
      FILING DATE: 22-Oct-1996
    ATTORNEY/AGENT INFORMATION:
      NAME: Kubinec, Jeffrey S.
      REGISTRATION NUMBER: 36,575
      REFERENCE/DOCKET NUMBER: P1017R1
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 650/225-8228
      TELEFAX: 650/952-9881
   INFORMATION FOR SEQ ID NO: 33:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 6 amino acids
      TYPE: Amino Acid
      TOPOLOGY: Linear
US-08-954-915A-33
  Query Match
                         60.0%; Score 3; DB 3; Length 6;
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
          3; Conservative 0; Mismatches 0; Indels 0; Gaps
 Matches
                                                                         0;
Qу
           2 VLR 4
             Db
           2 VLR 4
```

```
RESULT 27
5314995-3
; Patent No. 5314995
     APPLICANT: FELL, HENRY P.; GAYLE, MARGIT A.
     TITLE OF INVENTION: THERAPEUTIC INTERLEUKIN-2-ANTIBODY
; BASED FUSION PROTEINS
    NUMBER OF SEQUENCES: 8
     CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/07/468,390
      FILING DATE: 22-JAN-1990
;SEQ ID NO:3:
      LENGTH: 6
5314995-3
  Query Match
                        60.0%; Score 3; DB 6; Length 6;
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
 Matches
           3; Conservative 0; Mismatches 0; Indels
                                                             0; Gaps
Qу
           2 VLR 4
             111
           2 VLR 4
RESULT 28
US-08-637-759B-124
; Sequence 124, Application US/08637759B
; Patent No. 5876931
  GENERAL INFORMATION:
    APPLICANT: David William Holden
    TITLE OF INVENTION: Identification of Genes
    NUMBER OF SEQUENCES: 501
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Patrea L. Pabst
      STREET: 2800 One Atlantic Center
      STREET: 1201 West Peachtree Street
      CITY: Atlanta
      STATE: Georgia
     COUNTRY: USA
     ZIP: 30309-3450
   COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/637,759B
      FILING DATE: 03-MAY-1996
      CLASSIFICATION: 435
    PRIOR APPLICATION DATA:
     APPLICATION NUMBER: PCT/GB95/02875
      FILING DATE: 11-DEC-1995
     CLASSIFICATION: 435
  ATTORNEY/AGENT INFORMATION:
    NAME: Pabst, Patrea L.
      REGISTRATION NUMBER: 31,284
```

```
REFERENCE/DOCKET NUMBER: RPMS 101
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (404) 873-8794
      TELEFAX: (404) 873-8795
  INFORMATION FOR SEO ID NO: 124:
   SEQUENCE CHARACTERISTICS:
     LENGTH: 7 amino acids
      TYPE: amino acid
      STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: protein
    HYPOTHETICAL: NO
US-08-637-759B-124
 Query Match
                         60.0%; Score 3; DB 2; Length 7;
 Best Local Similarity 100.0%; Pred. No. 2.5e+05;
           3; Conservative 0; Mismatches 0; Indels
                                                               0; Gaps
                                                                          0;
           2 VLR 4
Qу
             111
           3 VLR 5
RESULT 29
US-08-871-355A-124
; Sequence 124, Application US/08871355A
; Patent No. 6015669
  GENERAL INFORMATION:
    APPLICANT: David William Holden
    TITLE OF INVENTION: Identification of Genes
    NUMBER OF SEQUENCES: 501
    CORRESPONDENCE ADDRESS:
     ADDRESSEE: Patrea L. Pabst
      STREET: 2800 One Atlantic Center
      STREET: 1201 West Peachtree Street
      CITY: Atlanta
      STATE: Georgia
      COUNTRY: USA
      ZIP: 30309-3450
   COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
     SOFTWARE: PatentIn Release #1.0, Version #1.30
   CURRENT APPLICATION DATA:
     APPLICATION NUMBER: US/08/871,355A
      FILING DATE: 09-JUN-1997
     CLASSIFICATION: 435
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: PCT/GB95/02875
      FILING DATE: 11-DEC-1995
      CLASSIFICATION: 435
    ATTORNEY/AGENT INFORMATION:
      NAME: Pabst, Patrea L.
      REGISTRATION NUMBER: 31,284
      REFERENCE/DOCKET NUMBER: RPMS 101 CON
    TELECOMMUNICATION INFORMATION:
```

```
TELEPHONE: (404) 873-8794
      TELEFAX: (404) 873-8795
   INFORMATION FOR SEQ ID NO: 124:
   SEQUENCE CHARACTERISTICS:
      LENGTH: 7 amino acids
      TYPE: amino acid
      STRANDEDNESS: single
      TOPOLOGY: linear
    MOLECULE TYPE: protein
    HYPOTHETICAL: NO
US-08-871-355A-124
  Query Match
                         60.0%; Score 3; DB 3; Length 7;
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
 Matches
           3; Conservative 0; Mismatches 0; Indels
                                                            0; Gaps
                                                                           0;
Qу
           2 VLR 4
             Db
           3 VLR 5
RESULT 30
US-08-954-915A-42
; Sequence 42, Application US/08954915A
; Patent No. 6028055
; GENERAL INFORMATION:
    APPLICANT: Lowe, David
    APPLICANT: Schoenfeld, Jill
    TITLE OF INVENTION: Receptor Selective BNP
    NUMBER OF SEQUENCES: 52
    CORRESPONDENCE ADDRESS:
     ADDRESSEE: Genentech, Inc.
     STREET: 1 DNA Way
      CITY: South San Francisco
      STATE: California
      COUNTRY: USA
      ZIP: 94080
    COMPUTER READABLE FORM:
      MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: WinPatin (Genentech)
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/954,915A
      FILING DATE: 21-Oct-1997
      CLASSIFICATION: 514
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: 60/028854
      FILING DATE: 22-Oct-1996
    ATTORNEY/AGENT INFORMATION:
      NAME: Kubinec, Jeffrey S.
      REGISTRATION NUMBER: 36,575
      REFERENCE/DOCKET NUMBER: P1017R1
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 650/225-8228
      TELEFAX: 650/952-9881
  INFORMATION FOR SEQ ID NO: 42:
```

```
SEQUENCE CHARACTERISTICS:
       LENGTH: 7 amino acids
       TYPE: Amino Acid
       TOPOLOGY: Linear
US-08-954-915A-42
  Query Match
                         60.0%; Score 3; DB 3; Length 7;
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
 Matches
           3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                           0;
Qу
           2 VLR 4
             111
Db
           2 VLR 4
RESULT 31
US-09-201-945-124
; Sequence 124, Application US/09201945
; Patent No. 6342215
  GENERAL INFORMATION:
    APPLICANT: David William Holden
    TITLE OF INVENTION: Identification of Genes
    NUMBER OF SEQUENCES: 501
    CORRESPONDENCE ADDRESS:
     ADDRESSEE: Patrea L. Pabst
     STREET: 2800 One Atlantic Center
     STREET: 1201 West Peachtree Street
     CITY: Atlanta
      STATE: Georgia
      COUNTRY: USA
      ZIP: 30309-3450
    COMPUTER READABLE FORM:
     MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.30
    CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/09/201,945
      FILING DATE:
      CLASSIFICATION:
   PRIOR APPLICATION DATA:
     APPLICATION NUMBER: 08/637,759
      FILING DATE:
      CLASSIFICATION:
    ATTORNEY/AGENT INFORMATION:
      NAME: Pabst, Patrea L.
      REGISTRATION NUMBER: 31,284
      REFERENCE/DOCKET NUMBER: RPMS 101
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (404) 873-8794
      TELEFAX: (404) 873-8795
  INFORMATION FOR SEO ID NO: 124:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 7 amino acids
     TYPE: amino acid
      STRANDEDNESS: single
     TOPOLOGY: linear
```

```
MOLECULE TYPE: protein
     HYPOTHETICAL: NO
US-09-201-945-124
  Query Match
                         60.0%; Score 3; DB 4; Length 7;
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
  Matches
          3; Conservative 0; Mismatches 0; Indels
                                                               0; Gaps
                                                                           0;
Qу
            2 VLR 4
              Db
            3 VLR 5
RESULT 32
US-09-658-645A-9
; Sequence 9, Application US/09658645A
; Patent No. 6423518
; GENERAL INFORMATION:
; APPLICANT: Anderson, Stephen
; APPLICANT: Banta, Scott
  TITLE OF INVENTION: Design and Production of Mutant 2,5-Diketo-D-gluconic
; TITLE OF INVENTION: Acid Reductase Enzymes with Altered Cofactor Dependency
; FILE REFERENCE: RU-0078
; CURRENT APPLICATION NUMBER: US/09/658,645A
; CURRENT FILING DATE: 2000-09-11
; NUMBER OF SEQ ID NOS: 12
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 9
   LENGTH: 7
   TYPE: PRT
    ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: Description of Artificial Sequence: Synthetic
US-09-658-645A-9
  Query Match
                         60.0%; Score 3; DB 4; Length 7;
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
  Matches
          3; Conservative 0; Mismatches 0; Indels
                                                               0; Gaps
                                                                           0;
QУ
           2 VLR 4
             3 VLR 5
Db
RESULT 33
US-08-526-710-4
; Sequence 4, Application US/08526710
; Patent No. 5622699
  GENERAL INFORMATION:
    APPLICANT: Ruoslahti, Erkki
    APPLICANT: Pasqualini, Renata
    TITLE OF INVENTION: Method of Identifying Molecules That
    TITLE OF INVENTION: Home to a Selected Organ In Vivo
    NUMBER OF SEQUENCES: 44
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Campbell and Flores
      STREET: 4370 La Jolla Village Drive, Suite 700
```

```
CITY: San Diego
      STATE: California
      COUNTRY: United States
      ZIP: 92122
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
   CURRENT APPLICATION DATA:
     APPLICATION NUMBER: US/08/526,710
      FILING DATE: 11-SEP-1995
      CLASSIFICATION: 435
   ATTORNEY/AGENT INFORMATION:
     NAME: Campbell, Cathryn A.
      REGISTRATION NUMBER: 31,815
      REFERENCE/DOCKET NUMBER: P-LJ 1779
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (619) 535-9001
      TELEFAX: (619) 535-8949
  INFORMATION FOR SEQ ID NO: 4:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 8 amino acids
      TYPE: amino acid
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-08-526-710-4
 Query Match
                         60.0%; Score 3; DB 1; Length 8;
 Best Local Similarity 100.0%; Pred. No. 2.5e+05;
 Matches
          3; Conservative 0; Mismatches 0; Indels
                                                               0; Gaps
                                                                         0:
           2 VLR 4
QУ
             111
           2 VLR 4
Db
RESULT 34
US-08-446-038B-11
; Sequence 11, Application US/08446038B
; Patent No. 5658791
  GENERAL INFORMATION:
    APPLICANT: Wilks, Andrew F.; Ziemiecki, Andrew;
    APPLICANT: Harpur, Ailsa
    TITLE OF INVENTION: No. 5658791el Protein Tyrosine Kinase
    NUMBER OF SEQUENCES: 23
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Felfe & Lynch
      STREET: 805 Third Avenue
      CITY: New York City
      STATE: New York
      COUNTRY: USA
      ZIP: 10022
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Diskette, 3.5 inch, 360 kb storage
      COMPUTER: IBM PS/2
     OPERATING SYSTEM: PC-DOS
```

```
SOFTWARE: Wordperfect
     CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/08/446,038B
       FILING DATE: 19-MAY-1995
      CLASSIFICATION: 424
    PRIOR APPLICATION DATA:
     APPLICATION NUMBER: 08/064,067
      FILING DATE: 30-Jun-1993
      APPLICATION NUMBER: PCT/US91/08889
      FILING DATE: 26-No. 5658791-1991
    PRIOR APPLICATION DATA:
     APPLICATION NUMBER: Australian PK3594/90
      FILING DATE: 28-No. 5658791-1990
   PRIOR APPLICATION DATA:
     APPLICATION NUMBER: Australian 88229/91
      FILING DATE: 27-No. 5658791-1991
    ATTORNEY/AGENT INFORMATION:
      NAME: Hanson, No. 5658791man D.
      REGISTRATION NUMBER: 30,946
      REFERENCE/DOCKET NUMBER: LUD 5244
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 212-688-9200
      TELEFAX: 212-838-3884
  INFORMATION FOR SEQ ID NO: 11:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 8 amino acid residues
      TYPE: amino acid
      TOPOLOGY: linear
US-08-446-038B-11
  Query Match
                         60.0%; Score 3; DB 1; Length 8:
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
           3; Conservative 0; Mismatches 0; Indels
                                                               0; Gaps
                                                                           0;
           2 VLR 4
Qу
             4 VLR 6
RESULT 35
US-08-446-010B-11
; Sequence 11, Application US/08446010B
; Patent No. 5716818
  GENERAL INFORMATION:
    APPLICANT: Wilks, Andrew F.; Ziemiecki, Andrew;
    APPLICANT: Harpur, Ailsa
    TITLE OF INVENTION: No. 5716818el Protein Tyrosine Kinase
    NUMBER OF SEQUENCES: 25
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Felfe & Lynch
      STREET: 805 Third Avenue
      CITY: New York City
      STATE: New York
      COUNTRY: USA
     ZIP: 10022
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Diskette, 3.5 inch, 360 kb storage
```

```
COMPUTER: IBM PS/2
       OPERATING SYSTEM: PC-DOS
       SOFTWARE: Wordperfect
    CURRENT APPLICATION DATA:
     APPLICATION NUMBER: US/08/446,010B
      FILING DATE: 19-May-1995
      CLASSIFICATION: 433
    PRIOR APPLICATION DATA:
     APPLICATION NUMBER: 08/446,038
      FILING DATE: 19-May-1995
    PRIOR APPLICATION DATA:
     APPLICATION NUMBER: 08/064,067
     FILING DATE: 30-Jun-1993
    PRIOR APPLICATION DATA:
     APPLICATION NUMBER: PCT/US91/08889
      FILING DATE: 26-No. 5716818-1991
    PRIOR APPLICATION DATA:
    APPLICATION NUMBER: Australian PK3594/90
      FILING DATE: 28-No. 5716818-1990
    PRIOR APPLICATION DATA:
     APPLICATION NUMBER: Australian 88229/91
      FILING DATE: 27-No. 5716818-1991
   ATTORNEY/AGENT INFORMATION:
     NAME: Baer, Madeline F.
      REGISTRATION NUMBER: 36,437
     REFERENCE/DOCKET NUMBER: LUD 5244.3
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 212-688-9200
      TELEFAX: 212-838-3884
  INFORMATION FOR SEQ ID NO: 11:
   SEQUENCE CHARACTERISTICS:
      LENGTH: 8 amino acid residues
      TYPE: amino acid
      TOPOLOGY: linear
US-08-446-010B-11
  Query Match
                         60.0%; Score 3; DB 1; Length 8;
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
 Matches
           3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                          0;
           2 VLR 4
Qу
             4 VLR 6
RESULT 36
US-08-805-445-11
; Sequence 11, Application US/08805445
; Patent No. 5821069
; GENERAL INFORMATION:
    APPLICANT: Wilks, Andrew F.; Ziemiecki, Andrew;
    APPLICANT: Harpur, Ailsa
    TITLE OF INVENTION: No. 5821069el Protein Tyrosine Kinase
    NUMBER OF SEQUENCES: 23
    CORRESPONDENCE ADDRESS:
    ADDRESSEE: Felfe & Lynch
     STREET: 805 Third Avenue
```

```
CITY: New York City
       STATE: New York
       COUNTRY: USA
      ZIP: 10022
     COMPUTER READABLE FORM:
     MEDIUM TYPE: Diskette, 3.5 inch, 360 kb storage
      COMPUTER: IBM PS/2
     OPERATING SYSTEM: PC-DOS
      SOFTWARE: Wordperfect
   CURRENT APPLICATION DATA:
     APPLICATION NUMBER: US/08/805,445
     FILING DATE: 25-FEB-1997
      CLASSIFICATION: 435
   PRIOR APPLICATION DATA:
     APPLICATION NUMBER: US 08/446,038
     FILING DATE: 19-MAY-1995
      APPLICATION NUMBER: 08/064,067
     FILING DATE: 30-Jun-1993
     APPLICATION NUMBER: PCT/US91/08889
     FILING DATE: 26-No. 5821069-1991
   PRIOR APPLICATION DATA:
     APPLICATION NUMBER: Australian PK3594/90
      FILING DATE: 28-No. 5821069-1990
   PRIOR APPLICATION DATA:
     APPLICATION NUMBER: Australian 88229/91
      FILING DATE: 27-No. 5821069-1991
   ATTORNEY/AGENT INFORMATION:
     NAME: Hanson, No. 5821069man D.
     REGISTRATION NUMBER: 30,946
     REFERENCE/DOCKET NUMBER: LUD 5244
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 212-688-9200
      TELEFAX: 212-838-3884
  INFORMATION FOR SEQ ID NO: 11:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 8 amino acid residues
      TYPE: amino acid
      TOPOLOGY: linear
US-08-805-445-11
 Query Match
                        60.0%; Score 3; DB 2; Length 8;
 Best Local Similarity 100.0%; Pred. No. 2.5e+05;
 Matches
          3; Conservative 0; Mismatches 0; Indels
                                                             0; Gaps
                                                                         0;
           2 VLR 4
Qу
             Db
           4 VLR 6
RESULT 37
US-08-064-067D-11
; Sequence 11, Application US/08064067D
; Patent No. 5852184
  GENERAL INFORMATION:
    APPLICANT: Wilks, Andrew F.; Ziemiecki, Andrew;
    APPLICANT: Harpur, Ailsa
    TITLE OF INVENTION: No. 5852184el Protein Tyrosine Kinase
```

```
NUMBER OF SEQUENCES: 23
     CORRESPONDENCE ADDRESS:
      ADDRESSEE: Felfe & Lynch
      STREET: 805 Third Avenue
      CITY: New York City
     STATE: New York
     COUNTRY: USA
     ZIP: 10022
    COMPUTER READABLE FORM:
      MEDIUM TYPE: Diskette, 3.5 inch, 360 kb storage
      COMPUTER: IBM PS/2
      OPERATING SYSTEM: PC-DOS
      SOFTWARE: Wordperfect
    CURRENT APPLICATION DATA:
     APPLICATION NUMBER: US/08/064,067D
      FILING DATE: 30-Jun-1993
    PRIOR APPLICATION DATA:
     APPLICATION NUMBER: PCT/US91/08889
      FILING DATE: 26-No. 5852184-1991
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: Australian PK3594/90
      FILING DATE: 28-No. 5852184-1990
    PRIOR APPLICATION DATA:
      APPLICATION NUMBER: Australian 88229/91
      FILING DATE: 27-No. 5852184-1991
    ATTORNEY/AGENT INFORMATION:
      NAME: Hanson, No. 5852184man D.
      REGISTRATION NUMBER: 30,946
      REFERENCE/DOCKET NUMBER: LUD 5244
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 212-688-9200
      TELEFAX: 212-838-3884
  INFORMATION FOR SEQ ID NO: 11:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 8 amino acid residues
      TYPE: amino acid
      TOPOLOGY: linear
US-08-064-067D-11
  Query Match
                         60.0%; Score 3; DB 2; Length 8;
 Best Local Similarity 100.0%; Pred. No. 2.5e+05;
 Matches
           3; Conservative 0; Mismatches 0; Indels 0; Gaps
Qу
           2 VLR 4
             Db
           4 VLR 6
RESULT 38
US-09-066-208-11
; Sequence 11, Application US/09066208
; Patent No. 5910426
  GENERAL INFORMATION:
    APPLICANT: Wilks, Andrew F.; Ziemiecki, Andrew;
    APPLICANT: Harpur, Ailsa
    TITLE OF INVENTION: No. 5910426el Protein Tyrosine Kinase
    NUMBER OF SEQUENCES: 23
```

```
CORRESPONDENCE ADDRESS:
      ADDRESSEE: Felfe & Lynch
      STREET: 805 Third Avenue
      CITY: New York City
      STATE: New York
      COUNTRY: USA
      ZIP: 10022
   COMPUTER READABLE FORM:
      MEDIUM TYPE: Diskette, 3.5 inch, 360 kb storage
      COMPUTER: IBM PS/2
      OPERATING SYSTEM: PC-DOS
      SOFTWARE: Wordperfect
   CURRENT APPLICATION DATA:
     APPLICATION NUMBER: US/09/066,208
      FILING DATE:
      CLASSIFICATION:
   PRIOR APPLICATION DATA:
    APPLICATION NUMBER: 08/805,445
     FILING DATE: 25-FEB-1997
     APPLICATION NUMBER: US 08/446,038
     FILING DATE: 19-MAY-1995
     APPLICATION NUMBER: 08/064,067
     FILING DATE: 30-Jun-1993
     APPLICATION NUMBER: PCT/US91/08889
     FILING DATE: 26-No. 5910426-1991
   PRIOR APPLICATION DATA:
     APPLICATION NUMBER: Australian PK3594/90
     FILING DATE: 28-No. 5910426-1990
    PRIOR APPLICATION DATA:
    APPLICATION NUMBER: Australian 88229/91
     FILING DATE: 27-No. 5910426-1991
   ATTORNEY/AGENT INFORMATION:
     NAME: Hanson, No. 5910426man D.
      REGISTRATION NUMBER: 30,946
      REFERENCE/DOCKET NUMBER: LUD 5244
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: 212-688-9200
      TELEFAX: 212-838-3884
  INFORMATION FOR SEO ID NO: 11:
   SEQUENCE CHARACTERISTICS:
     LENGTH: 8 amino acid residues
      TYPE: amino acid
      TOPOLOGY: linear
US-09-066-208-11
  Query Match
                        60.0%; Score 3; DB 2; Length 8;
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
 Matches
           3; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
           2 VLR 4
Qу
             4 VLR 6
RESULT 39
US-08-862-855-4
; Sequence 4, Application US/08862855
```

```
; Patent No. 6068829
   GENERAL INFORMATION:
     APPLICANT: Ruoslahti, Erkki
     APPLICANT: Pasqualini, Renata
     TITLE OF INVENTION: Method of Identifying Molecules That
     TITLE OF INVENTION: Home to a Selected Organ In Vivo
    NUMBER OF SEQUENCES: 44
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Campbell & Flores LLP
       STREET: 4370 La Jolla Village Drive, Suite 700
      CITY: San Diego
      STATE: California
      COUNTRY: United States
       ZIP: 92122
   COMPUTER READABLE FORM:
      MEDIUM TYPE: Floppy disk
       COMPUTER: IBM PC compatible
      OPERATING SYSTEM: PC-DOS/MS-DOS
     SOFTWARE: PatentIn Release #1.0, Version #1.25
   CURRENT APPLICATION DATA:
     APPLICATION NUMBER: US/08/862,855
     FILING DATE:
      CLASSIFICATION: 424
   PRIOR APPLICATION DATA:
     APPLICATION NUMBER: US 08/526,710
      FILING DATE: 11-SEP-1995
   PRIOR APPLICATION DATA:
     APPLICATION NUMBER: US 08/813,273
     FILING DATE: 10-MAR-1997
    ATTORNEY/AGENT INFORMATION:
     NAME: Campbell, Cathryn A.
      REGISTRATION NUMBER: 31,815
     REFERENCE/DOCKET NUMBER: P-LJ 2621
   TELECOMMUNICATION INFORMATION:
      TELEPHONE: (619) 535-9001
      TELEFAX: (619) 535-8949
  INFORMATION FOR SEQ ID NO: 4:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 8 amino acids
      TYPE: amino acid
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-08-862-855-4
 Query Match
                         60.0%; Score 3; DB 3; Length 8;
 Best Local Similarity 100.0%; Pred. No. 2.5e+05;
          3; Conservative 0; Mismatches 0; Indels
                                                              0; Gaps
                                                                          0;
Qу
           2 VLR 4
             2 VLR 4
RESULT 40
US-09-226-985-4
; Sequence 4, Application US/09226985
; Patent No. 6296832
```

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GENERAL INFORMATION:
     APPLICANT: Ruoslahti, Erkki
     APPLICANT: Pasqualini, Renata
     TITLE OF INVENTION: Molecules That Home to a Selected Organ In Vivo
     NUMBER OF SEQUENCES: 44
    CORRESPONDENCE ADDRESS:
     ADDRESSEE: Campbell & Flores LLP
      STREET: 4370 La Jolla Village Drive, Suite 700
      CITY: San Diego
       STATE: California
       COUNTRY: United States
       ZIP: 92122
   COMPUTER READABLE FORM:
       MEDIUM TYPE: Floppy disk
       COMPUTER: IBM PC compatible
       OPERATING SYSTEM: PC-DOS/MS-DOS
     SOFTWARE: PatentIn Release #1.0, Version #1.25
   CURRENT APPLICATION DATA:
     APPLICATION NUMBER: US/09/226,985
     FILING DATE:
      CLASSIFICATION:
   PRIOR APPLICATION DATA:
     APPLICATION NUMBER: US 08/526,710
      FILING DATE: 11-SEP-1995
   PRIOR APPLICATION DATA:
     APPLICATION NUMBER: US 08/813,273
      FILING DATE: 10-MAR-1997
   PRIOR APPLICATION DATA:
      APPLICATION NUMBER: US 08/862,855
      FILING DATE: 23-MAY-1997
    ATTORNEY/AGENT INFORMATION:
     NAME: Campbell, Cathryn A.
      REGISTRATION NUMBER: 31,815
      REFERENCE/DOCKET NUMBER: P-LJ 3423
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (619) 535-9001
      TELEFAX: (619) 535-8949
  INFORMATION FOR SEQ ID NO: 4:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 8 amino acids
      TYPE: amino acid
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-09-226-985-4
  Query Match
                         60.0%; Score 3; DB 3; Length 8;
 Best Local Similarity 100.0%; Pred. No. 2.5e+05;
 Matches
           3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                          0;
           2 VLR 4
Qу
             111
Dh
           2 VLR 4
RESULT 41
US-09-227-906-4
; Sequence 4, Application US/09227906
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; Patent No. 6306365
  GENERAL INFORMATION:
    APPLICANT: Ruoslahti, Erkki
    APPLICANT: Pasqualini, Renata
    TITLE OF INVENTION: Method of Identifying Molecules That
    TITLE OF INVENTION: Home to a Selected Organ In Vivo
    NUMBER OF SEQUENCES: 44
    CORRESPONDENCE ADDRESS:
     ADDRESSEE: Campbell & Flores LLP
     STREET: 4370 La Jolla Village Drive, Suite 700
     CITY: San Diego
      STATE: California
      COUNTRY: United States
     ZIP: 92122
   COMPUTER READABLE FORM:
    MEDIUM TYPE: Floppy disk
      COMPUTER: IBM PC compatible
     OPERATING SYSTEM: PC-DOS/MS-DOS
      SOFTWARE: PatentIn Release #1.0, Version #1.25
   CURRENT APPLICATION DATA:
      APPLICATION NUMBER: US/09/227,906
      FILING DATE:
      CLASSIFICATION:
   PRIOR APPLICATION DATA:
     APPLICATION NUMBER: US 08/526,710
     FILING DATE: 11-SEP-1995
    PRIOR APPLICATION DATA:
    APPLICATION NUMBER: US 08/813,273
      FILING DATE: 10-MAR-1997
   PRIOR APPLICATION DATA:
    APPLICATION NUMBER: US 08/862,855
      FILING DATE: 23-MAY-1997
   ATTORNEY/AGENT INFORMATION:
     NAME: Campbell, Cathryn A.
      REGISTRATION NUMBER: 31,815
      REFERENCE/DOCKET NUMBER: P-LJ 3424
    TELECOMMUNICATION INFORMATION:
      TELEPHONE: (619) 535-9001
      TELEFAX: (619) 535-8949
 INFORMATION FOR SEQ ID NO: 4:
    SEQUENCE CHARACTERISTICS:
     LENGTH: 8 amino acids
      TYPE: amino acid
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-09-227-906-4
 Query Match
                        60.0%; Score 3; DB 4; Length 8;
 Best Local Similarity 100.0%; Pred. No. 2.5e+05;
 Matches
           3; Conservative 0; Mismatches 0; Indels 0; Gaps
           2 VLR 4
Qу
             111
           2 VLR 4
Db
```

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US-08-271-539-28
; Sequence 28, Application US/08271539
; Patent No. 6358509
; GENERAL INFORMATION:
  APPLICANT: Ramanathan, Lata
; APPLICANT: Seelig, Gail F.
; APPLICANT: Trotta, Paul P.
; TITLE OF INVENTION: Antibody Antagonists of Human Interleukin-4
; FILE REFERENCE: JB0059KQ US
; CURRENT APPLICATION NUMBER: US/08/271,539
  CURRENT FILING DATE: 1994-07-07
  PRIOR APPLICATION NUMBER: US 07/453,570
  PRIOR FILING DATE: 1989-12-20
; PRIOR APPLICATION NUMBER: PCT/US90/07289
; PRIOR FILING DATE: 1990-12-18
; PRIOR APPLICATION NUMBER: US 07/859,689
; PRIOR FILING DATE: 1992-06-11
; NUMBER OF SEQ ID NOS: 46
  SOFTWARE: PatentIn Ver. 2.1
; SEO ID NO 28
   LENGTH: 8
   TYPE: PRT
   ORGANISM: Artificial Sequence
    FEATURE:
    OTHER INFORMATION: Description of Artificial Sequence: synthetic
    OTHER INFORMATION: polypeptide
US-08-271-539-28
  Query Match
                         60.0%; Score 3; DB 4; Length 8;
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
  Matches
           3; Conservative 0; Mismatches 0; Indels
           2 VLR 4
Qу
             5 VLR 7
Db
RESULT 43
US-08-271-539-29
; Sequence 29, Application US/08271539
; Patent No. 6358509
; GENERAL INFORMATION:
; APPLICANT: Ramanathan, Lata
; APPLICANT: Seelig, Gail F.
; APPLICANT: Trotta, Paul P.
; TITLE OF INVENTION: Antibody Antagonists of Human Interleukin-4
; FILE REFERENCE: JB0059KQ US
; CURRENT APPLICATION NUMBER: US/08/271,539
; CURRENT FILING DATE: 1994-07-07
  PRIOR APPLICATION NUMBER: US 07/453,570
  PRIOR FILING DATE: 1989-12-20
; PRIOR APPLICATION NUMBER: PCT/US90/07289
; PRIOR FILING DATE: 1990-12-18
; PRIOR APPLICATION NUMBER: US 07/859,689
; PRIOR FILING DATE: 1992-06-11
; NUMBER OF SEQ ID NOS: 46
; SOFTWARE: PatentIn Ver. 2.1
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; SEQ ID NO 29
   LENGTH: 8
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: Description of Artificial Sequence: synthetic
   OTHER INFORMATION: polypeptide
US-08-271-539-29
  Query Match
                         60.0%; Score 3; DB 4; Length 8;
 Best Local Similarity 100.0%; Pred. No. 2.5e+05;
           3; Conservative 0; Mismatches 0; Indels
                                                               0; Gaps
 Matches
                                                                           0;
           2 VLR 4
QУ
             Db
           4 VLR 6
RESULT 44
US-08-271-539-30
; Sequence 30, Application US/08271539
; Patent No. 6358509
; GENERAL INFORMATION:
; APPLICANT: Ramanathan, Lata
; APPLICANT: Seelig, Gail F.
; APPLICANT: Trotta, Paul P.
  TITLE OF INVENTION: Antibody Antagonists of Human Interleukin-4
; FILE REFERENCE: JB0059KQ US
; CURRENT APPLICATION NUMBER: US/08/271,539
; CURRENT FILING DATE: 1994-07-07
; PRIOR APPLICATION NUMBER: US 07/453,570
; PRIOR FILING DATE: 1989-12-20
; PRIOR APPLICATION NUMBER: PCT/US90/07289
; PRIOR FILING DATE: 1990-12-18
; PRIOR APPLICATION NUMBER: US 07/859,689
  PRIOR FILING DATE: 1992-06-11
; NUMBER OF SEQ ID NOS: 46
; SOFTWARE: PatentIn Ver. 2.1
; SEO ID NO 30
   LENGTH: 8
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: Description of Artificial Sequence: synthetic
   OTHER INFORMATION: polypeptide
US-08-271-539-30
  Query Match
                         60.0%; Score 3; DB 4; Length 8;
 Best Local Similarity 100.0%; Pred. No. 2.5e+05;
           3; Conservative 0; Mismatches 0; Indels 0; Gaps
 Matches
           2 VLR 4
Qу
             111
           3 VLR 5
Dh
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US-08-271-539-31
; Sequence 31, Application US/08271539
; Patent No. 6358509
; GENERAL INFORMATION:
; APPLICANT: Ramanathan, Lata
; APPLICANT: Seelig, Gail F.
; APPLICANT: Trotta, Paul P.
 TITLE OF INVENTION: Antibody Antagonists of Human Interleukin-4
; FILE REFERENCE: JB0059KQ US
; CURRENT APPLICATION NUMBER: US/08/271,539
; CURRENT FILING DATE: 1994-07-07
  PRIOR APPLICATION NUMBER: US 07/453,570
; PRIOR FILING DATE: 1989-12-20
; PRIOR APPLICATION NUMBER: PCT/US90/07289
; PRIOR FILING DATE: 1990-12-18
; PRIOR APPLICATION NUMBER: US 07/859,689
; PRIOR FILING DATE: 1992-06-11
; NUMBER OF SEQ ID NOS: 46
  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 31
  LENGTH: 8
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: Description of Artificial Sequence: synthetic
   OTHER INFORMATION: polypeptide
US-08-271-539-31
  Query Match
                         60.0%; Score 3; DB 4; Length 8;
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
 Matches
           3; Conservative 0; Mismatches 0; Indels
                                                             0; Gaps
Qу
           2 VLR 4
             2 VLR 4
Db
RESULT 46
US-08-271-539-32
; Sequence 32, Application US/08271539
; Patent No. 6358509
; GENERAL INFORMATION:
; APPLICANT: Ramanathan, Lata
; APPLICANT: Seelig, Gail F.
; APPLICANT: Trotta, Paul P.
; TITLE OF INVENTION: Antibody Antagonists of Human Interleukin-4
; FILE REFERENCE: JB0059KQ US
; CURRENT APPLICATION NUMBER: US/08/271,539
  CURRENT FILING DATE: 1994-07-07
  PRIOR APPLICATION NUMBER: US 07/453,570
; PRIOR FILING DATE: 1989-12-20
; PRIOR APPLICATION NUMBER: PCT/US90/07289
; PRIOR FILING DATE: 1990-12-18
; PRIOR APPLICATION NUMBER: US 07/859.689
; PRIOR FILING DATE: 1992-06-11
; NUMBER OF SEQ ID NOS: 46
  SOFTWARE: PatentIn Ver. 2.1
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; SEQ ID NO 32
   LENGTH: 8
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: Description of Artificial Sequence: synthetic
   OTHER INFORMATION: polypeptide
US-08-271-539-32
  Query Match
                         60.0%; Score 3; DB 4; Length 8;
 Best Local Similarity 100.0%; Pred. No. 2.5e+05;
 Matches
           3; Conservative 0; Mismatches 0; Indels
           2 VLR 4
Qу
             111
Db
           1 VLR 3
RESULT 47
US-09-555-313B-10
; Sequence 10, Application US/09555313B
; Patent No. 6506580
; GENERAL INFORMATION:
; APPLICANT: FICSHMEISTER, Rudolph et al.
  TITLE OF INVENTION: Splicing variants of the human serotoninergic receptor
  TITLE OF INVENTION: 5-HT4 and uses thereof, in particular for screening
 FILE REFERENCE: P06762US00/BAS
  CURRENT APPLICATION NUMBER: US/09/555,313B
; CURRENT FILING DATE: 2002-08-13
; PRIOR APPLICATION NUMBER: FR 97/15037
; PRIOR FILING DATE: 1997-11-28
; NUMBER OF SEQ ID NOS: 24
  SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 10
   LENGTH: 8
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   NAME/KEY: OTHER
   LOCATION: (2)..(2)
    OTHER INFORMATION: Xaa in position 2 = aminohexanoic acid
US-09-555-313B-10
  Query Match
                         60.0%; Score 3; DB 4; Length 8;
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
 Matches
          3; Conservative 0; Mismatches
                                               0; Indels
           2 VLR 4
Qу
             | | | |
           5 VLR 7
Db
RESULT 48
PCT-US95-08354A-5
; Sequence 5, Application PC/TUS9508354A
; GENERAL INFORMATION:
    APPLICANT: Temple University - Of The
```

```
APPLICANT: Commonwealth System of Higher Education
     TITLE OF INVENTION: JAK3 PROTEIN TYROSINE
     TITLE OF INVENTION: KINASE AND DNA ENCODING THE SAME
     NUMBER OF SEQUENCES: 9
     CORRESPONDENCE ADDRESS:
      ADDRESSEE: Seidel, Gonda, Lavorgna
      ADDRESSEE: & Monaco, P.C.
       STREET: Suite 1800, Two Penn Center
       CITY: Philadelphia
       STATE: Pennsylvania
       COUNTRY: U.S.A.
       ZIP: 19102
    COMPUTER READABLE FORM:
       MEDIUM TYPE: Diskette, 3.50 inch, 720 Kb
       COMPUTER: IBM PS/2
       OPERATING SYSTEM: MS-DOS
       SOFTWARE: WordPerfect 5.1
    CURRENT APPLICATION DATA:
     APPLICATION NUMBER: PCT/US95/08354A
      FILING DATE:
      CLASSIFICATION:
    PRIOR APPLICATION DATA:
       APPLICATION NUMBER: 08/272,368
       FILING DATE: 8 July 1994
     ATTORNEY/AGENT INFORMATION:
       NAME: Monaco, Daniel A.
       REGISTRATION NUMBER: 30,480
       REFERENCE/DOCKET NUMBER: 6056-203 PC
     TELECOMMUNICATION INFORMATION:
       TELEPHONE: (215) 568-8383
       TELEFAX: (215) 568-5549
   INFORMATION FOR SEQ ID NO: 5:
     SEQUENCE CHARACTERISTICS:
      LENGTH: 8 amino acids
       TYPE: amino acid
       STRANDEDNESS: single stranded
      TOPOLOGY: linear
PCT-US95-08354A-5
  Query Match
                         60.0%; Score 3; DB 5; Length 8;
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
  Matches
          3; Conservative 0; Mismatches 0; Indels
                                                               0; Gaps
                                                                           0;
Qу
           2 VLR 4
             Db
           4 VLR 6
RESULT 49
US-08-526-710-20
; Sequence 20, Application US/08526710
; Patent No. 5622699
  GENERAL INFORMATION:
    APPLICANT: Ruoslahti, Erkki
    APPLICANT: Pasqualini, Renata
    TITLE OF INVENTION: Method of Identifying Molecules That
    TITLE OF INVENTION: Home to a Selected Organ In Vivo
```

```
NUMBER OF SEQUENCES: 44
     CORRESPONDENCE ADDRESS:
       ADDRESSEE: Campbell and Flores
       STREET: 4370 La Jolla Village Drive, Suite 700
       CITY: San Diego
       STATE: California
     COUNTRY: United States
      ZIP: 92122
    COMPUTER READABLE FORM:
       MEDIUM TYPE: Floppy disk
       COMPUTER: IBM PC compatible
       OPERATING SYSTEM: PC-DOS/MS-DOS
       SOFTWARE: PatentIn Release #1.0, Version #1.25
   CURRENT APPLICATION DATA:
     APPLICATION NUMBER: US/08/526,710
      FILING DATE: 11-SEP-1995
      CLASSIFICATION: 435
    ATTORNEY/AGENT INFORMATION:
     NAME: Campbell, Cathryn A.
       REGISTRATION NUMBER: 31,815
       REFERENCE/DOCKET NUMBER: P-LJ 1779
    TELECOMMUNICATION INFORMATION:
       TELEPHONE: (619) 535-9001
       TELEFAX: (619) 535-8949
  INFORMATION FOR SEQ ID NO: 20:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 9 amino acids
      TYPE: amino acid
      TOPOLOGY: linear
    MOLECULE TYPE: peptide
US-08-526-710-20
  Query Match
                         60.0%; Score 3; DB 1; Length 9;
  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
 Matches 3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                           0;
QУ
           2 VLR 4
             111
Db
           1 VLR 3
RESULT 50
US-08-159-339A-272
; Sequence 272, Application US/08159339A
; Patent No. 6037135
  GENERAL INFORMATION:
    APPLICANT: Kubo, Ralph T.
    APPLICANT: Grey, Howard M.
    APPLICANT: Sette, Alessandro
    APPLICANT: Celis, Esteban
    TITLE OF INVENTION: HLA Binding peptides and Their
    TITLE OF INVENTION: Uses
    NUMBER OF SEQUENCES: 1254
    CORRESPONDENCE ADDRESS:
      ADDRESSEE: Townsend and Townsend and Crew LLP
      STREET: Two Embarcadero Center, Eighth Floor
     CITY: San Francisco
```

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STATE: CA
       COUNTRY: USA
       ZIP: 94111-3834
     COMPUTER READABLE FORM:
       MEDIUM TYPE: Diskette
       COMPUTER: IBM Compatible
      OPERATING SYSTEM: DOS
      SOFTWARE: FastSEQ for Windows Version 2.0
   CURRENT APPLICATION DATA:
     APPLICATION NUMBER: US/08/159,339A
      FILING DATE: 29-NOV-1993
       CLASSIFICATION: 424
   PRIOR APPLICATION DATA:
     APPLICATION NUMBER: US 07/926,666
     FILING DATE: 07-AUG-1992
     APPLICATION NUMBER: US 08/027,746
    FILING DATE: 05-MAR-1993
APPLICATION NUMBER: US 08/103,396
FILING DATE: 06-AUG-1993
   ATTORNEY/AGENT INFORMATION:
     NAME: Weber, Ellen Lauver
     REGISTRATION NUMBER: 32,762
      REFERENCE/DOCKET NUMBER: 018623-005030US
   TELECOMMUNICATION INFORMATION:
       TELEPHONE: (415) 576-0200
       TELEFAX: (415) 576-0300
       TELEX:
 INFORMATION FOR SEQ ID NO: 272:
    SEQUENCE CHARACTERISTICS:
      LENGTH: 9 amino acids
       TYPE: amino acid
       STRANDEDNESS: single
      TOPOLOGY: linear
     MOLECULE TYPE: peptide
US-08-159-339A-272
  Query Match
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  Best Local Similarity 100.0%; Pred. No. 2.5e+05;
          3; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Matches
QУ
           2 VLR 4
              1 VLR 3
Search completed: November 28, 2003, 15:42:38
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Job time : 24 secs

GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.

OM protein - protein search, using sw model

Run on: November 28, 2003, 15:39:55; Search time 30 Seconds

(without alignments)

30.741 Million cell updates/sec

Title: US-09-228-866-46

Perfect score: 5

Sequence: 1 XVLRX 5

Scoring table: OLIGO

Gapop 60.0 , Gapext 60.0

Searched: 673684 seqs, 184443283 residues

Word size : 0

Total number of hits satisfying chosen parameters: 163174

Minimum DB seq length: 5
Maximum DB seq length: 33

Post-processing: Listing first 100 summaries

Database : Published_Applications AA:*

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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Result Query

No. Score Match Length DB ID

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Sequence 46, Appl
Sequence 14, Appl
Sequence 16, Appl
Sequence 43, Appl
Sequence 384, App
Sequence 202, App
Sequence 246, App
Sequence 246, App
Sequence 246, App
Sequence 246, App
Sequence 34, Appl
Sequence 34, Appl
Sequence 202, App
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ALIGNMENTS

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RESULT 1
US-08-736-019-165
; Sequence 165, Application US/08736019
; Publication No. US20030207799A1
; GENERAL INFORMATION:
; APPLICANT: Goodearl, Andrew
; APPLICANT: Stroobant, Paul
; APPLICANT: Minghetti, Luisa
```

```
APPLICANT: Waterfield, Michael
  APPLICANT: Marchionni, Mark
  APPLICANT: Chen, Mario
  APPLICANT: Hiles, Ian
  TITLE OF INVENTION: GLIAL MITOGENIC FACTORS, THEIR
  TITLE OF INVENTION: PREPARATION AND USE
  NUMBER OF SEQUENCES: 189
 CORRESPONDENCE ADDRESS:
   ADDRESSEE: Clark & Elbing LLP
   STREET: 176 Federal Street
    CITY: Boston
    STATE: Massachusetts
    COUNTRY: U.S.A.
    ZIP: 02110
 COMPUTER READABLE FORM:
    MEDIUM TYPE: 3.5" Diskette, 1.44 Mb
    COMPUTER: IBM Compatible Pentium
    OPERATING SYSTEM: Windows95
    SOFTWARE: FastSeq Version 2.0
  CURRENT APPLICATION DATA:
  APPLICATION NUMBER: US/08/736,019
   FILING DATE: 22-OCT-1996
    CLASSIFICATION: 514
 PRIOR APPLICATION DATA:
    APPLICATION NUMBER: 08/471,833
    FILING DATE: 06-JUN-1995
 PRIOR APPLICATION DATA:
   APPLICATION NUMBER: 08/036,555
   FILING DATE: 24-MAR-1993
 PRIOR APPLICATION DATA:
   APPLICATION NUMBER: 07/965,173
    FILING DATE: 23-OCT-1992
  PRIOR APPLICATION DATA:
   APPLICATION NUMBER: 07/907,138
   FILING DATE: 30-JUN-1992
  PRIOR APPLICATION DATA:
   APPLICATION NUMBER: 07/940.389
    FILING DATE: 03-SEP-1992
 PRIOR APPLICATION DATA:
  APPLICATION NUMBER: 07/863,703
   FILING DATE: 03-APR-1992
PRIOR APPLICATION DATA:
   APPLICATION NUMBER: UK 91 07566.3
   FILING DATE: 10-APR-1991
  ATTORNEY/AGENT INFORMATION:
   NAME: Bieker-Brady, Kristina
    REGISTRATION NUMBER: 39,109
   REFERENCE/DOCKET NUMBER: 04585/00200Q
 TELECOMMUNICATION INFORMATION:
   TELEPHONE: (617) 428-0200
    TELEFAX: (617) 428-7045
   TELEX:
INFORMATION FOR SEQ ID NO: 165:
SEQUENCE CHARACTERISTICS:
  LENGTH: 5
   TYPE: amino acid
  STRANDEDNESS:
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TOPOLOGY: linear
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; Sequence 13, Application US/09902517
; Publication No. US20030109430A1
; GENERAL INFORMATION:
  APPLICANT: Seilhamer, Jeffrey J.
  APPLICANT: Lewicki, John
; APPLICANT: Scarborough, Robert M.
; APPLICANT: Porter, Gordon J.
  TITLE OF INVENTION: IMMUNOASSAYS FOR HUMAN AND CANINE BRAIN
  TITLE OF INVENTION: NATRIURETIC PEPTIDE
; FILE REFERENCE: 219002025213
  CURRENT APPLICATION NUMBER: US/09/902,517
  CURRENT FILING DATE: 2001-07-09
  PRIOR APPLICATION NUMBER: 09/287,892
 PRIOR FILING DATE: 1999-04-07
  PRIOR APPLICATION NUMBER: 08/850,910
  PRIOR FILING DATE: 1997-05-05
  PRIOR APPLICATION NUMBER: 07/477,226
  PRIOR FILING DATE: 1990-02-08
  PRIOR APPLICATION NUMBER: 07/299,880
  PRIOR FILING DATE: 1989-01-19
; PRIOR APPLICATION NUMBER: 07/206,470
; PRIOR FILING DATE: 1988-06-14
; PRIOR APPLICATION NUMBER: 07/200,383
  PRIOR FILING DATE: 1988-05-31
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    ORGANISM: Unknown
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US-09-902-517-13
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60.0%; Score 3; DB 11; Length 5;

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; Publication No. US20020197681A1
; GENERAL INFORMATION:
; APPLICANT: Weigel, Paul
; TITLE OF INVENTION: Identification of Hyaluronan Receptor for Endocytosis
; FILE REFERENCE: 5820.603
; CURRENT APPLICATION NUMBER: US/09/842,930A
; CURRENT FILING DATE: 2001-04-22
; PRIOR APPLICATION NUMBER: 60/245,320
; PRIOR FILING DATE: 2000-11-02
; PRIOR APPLICATION NUMBER: 60/199,538
; PRIOR FILING DATE: 2000-04-25
; NUMBER OF SEQ ID NOS: 56
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 46
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   ORGANISM: Homo sapiens
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; Sequence 14, Application US/09902517
; Publication No. US20030109430A1
; GENERAL INFORMATION:
; APPLICANT: Seilhamer, Jeffrey J.
; APPLICANT: Lewicki, John
; APPLICANT: Scarborough, Robert M.
; APPLICANT: Porter, Gordon J.
  TITLE OF INVENTION: IMMUNOASSAYS FOR HUMAN AND CANINE BRAIN
  TITLE OF INVENTION: NATRIURETIC PEPTIDE
; FILE REFERENCE: 219002025213
; CURRENT APPLICATION NUMBER: US/09/902,517
; CURRENT FILING DATE: 2001-07-09
; PRIOR APPLICATION NUMBER: 09/287,892
; PRIOR FILING DATE: 1999-04-07
; PRIOR APPLICATION NUMBER: 08/850,910
; PRIOR FILING DATE: 1997-05-05
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  PRIOR FILING DATE: 1989-01-19
  PRIOR APPLICATION NUMBER: 07/206,470
; PRIOR FILING DATE: 1988-06-14
; PRIOR APPLICATION NUMBER: 07/200,383
; PRIOR FILING DATE: 1988-05-31
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  OTHER INFORMATION: Xaa = Asn or Lys
  NAME/KEY: VARIANT
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Db
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; Publication No. US20030109430A1
; GENERAL INFORMATION:
; APPLICANT: Seilhamer, Jeffrey J.
  APPLICANT: Lewicki, John
  APPLICANT: Scarborough, Robert M.
  APPLICANT: Porter, Gordon J.
  TITLE OF INVENTION: IMMUNOASSAYS FOR HUMAN AND CANINE BRAIN
  TITLE OF INVENTION: NATRIURETIC PEPTIDE
  FILE REFERENCE: 219002025213
  CURRENT APPLICATION NUMBER: US/09/902,517
  CURRENT FILING DATE: 2001-07-09
  PRIOR APPLICATION NUMBER: 09/287,892
  PRIOR FILING DATE: 1999-04-07
  PRIOR APPLICATION NUMBER: 08/850,910
  PRIOR FILING DATE: 1997-05-05
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; PRIOR FILING DATE: 1990-02-08
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; PRIOR FILING DATE: 1989-01-19
; PRIOR APPLICATION NUMBER: 07/206,470
; PRIOR FILING DATE: 1988-06-14
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; PRIOR FILING DATE: 1988-05-31
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Qу
            | | | |
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; Publication No. US20030186329A1
; GENERAL INFORMATION:
; APPLICANT: Madison, Edwin L.
; APPLICANT: Ke, Song-Hua
 TITLE OF INVENTION: USE OF SUBSTRATE SUBTRACTION LIBRARIES TO DISTINGUISH
; TITLE OF INVENTION: ENZYME SPECIFICITIES
; FILE REFERENCE: TSRI 543.1C1
; CURRENT APPLICATION NUMBER: US/10/348,232
; CURRENT FILING DATE: 2003-01-21
; PRIOR APPLICATION NUMBER: US 09/202,265
; PRIOR FILING DATE: 1999-03-22
; PRIOR APPLICATION NUMBER: PCT/US97/09760
; PRIOR FILING DATE: 1997-06-10
; PRIOR APPLICATION NUMBER: US 60/019,495
; PRIOR FILING DATE: 1996-06-10
; NUMBER OF SEQ ID NOS: 244
 SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 43
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; Sequence 384, Application US/09954385
; Publication No. US20030100467A1
; GENERAL INFORMATION:
; APPLICANT: Aehle, Wolfgang
; APPLICANT: Baldwin, Toby L.
; APPLICANT: Van Gastel, Franciscus J.C.
; APPLICANT: Janssen, Giselle G.
  APPLICANT: Murray, Christopher J.
  APPLICANT: Wang, Huaming
; APPLICANT: Winetzky, Deborah S.
  TITLE OF INVENTION: Binding Phenol Oxidizing Enzyme-peptide
  TITLE OF INVENTION: Complexes
; FILE REFERENCE: GC690
; CURRENT APPLICATION NUMBER: US/09/954,385
  CURRENT FILING DATE: 2001-09-12
  NUMBER OF SEQ ID NOS: 433
  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 384
   LENGTH: 7
    TYPE: PRT
    ORGANISM: Artificial Sequence
    FEATURE:
    OTHER INFORMATION: binding peptide
US-09-954-385-384
                         60.0%; Score 3; DB 11; Length 7;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 6e+05;
                                                                0; Gaps
          3; Conservative 0; Mismatches
                                                0; Indels
                                                                            0;
            2 VLR 4
Qу
              111
            5 VLR 7
Db
RESULT 8
US-10-052-578-202
; Sequence 202, Application US/10052578
; Publication No. US20030134787A1
; GENERAL INFORMATION:
; APPLICANT: Sloan-Kettering Institute for Cancer Research
; APPLICANT: Rothman, James E.
; APPLICANT: Mayhew, Mark
; APPLICANT: Hoe, Mee H.
 APPLICANT: Houghton, Alan
  APPLICANT: Hartl, Ulrich
  APPLICANT: Ouerfelli, Ouathek
  APPLICANT: Moroi, Yoichi
   TITLE OF INVENTION: CONJUGATE HEAT SHOCK PROTEIN-BINDING PEPTIDES
; FILE REFERENCE: 11746/46003
; CURRENT APPLICATION NUMBER: US/10/052,578
; CURRENT FILING DATE: 2002-01-17
; PRIOR APPLICATION NUMBER: 08/961,707
  PRIOR FILING DATE: 1997-10-31
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; NUMBER OF SEQ ID NOS: 321
  SOFTWARE: WordPerfect 8.0 for Windows
; SEQ ID NO 202
    LENGTH: 7
    TYPE: PRT
    ORGANISM: Artificial Sequence
    FEATURE:
    OTHER INFORMATION: peptide in ml3 coliphage
US-10-052-578-202
  Query Match
                          60.0%; Score 3; DB 12; Length 7;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
  Matches
           3; Conservative 0; Mismatches
                                                0; Indels
                                                                0; Gaps
                                                                            0;
QУ
            2 VLR 4
              | | |
           4 VLR 6
Db
RESULT 9
US-10-052-578-246
; Sequence 246, Application US/10052578
; Publication No. US20030134787A1
; GENERAL INFORMATION:
  APPLICANT: Sloan-Kettering Institute for Cancer Research
  APPLICANT: Rothman, James E.
  APPLICANT: Mayhew, Mark
  APPLICANT: Hoe, Mee H.
  APPLICANT: Houghton, Alan
  APPLICANT: Hartl, Ulrich
  APPLICANT: Ouerfelli, Ouathek
  APPLICANT: Moroi, Yoichi
  TITLE OF INVENTION: CONJUGATE HEAT SHOCK PROTEIN-BINDING PEPTIDES
  FILE REFERENCE: 11746/46003
  CURRENT APPLICATION NUMBER: US/10/052,578
  CURRENT FILING DATE: 2002-01-17
  PRIOR APPLICATION NUMBER: 08/961,707
  PRIOR FILING DATE: 1997-10-31
  NUMBER OF SEQ ID NOS: 321
  SOFTWARE: WordPerfect 8.0 for Windows
; SEO ID NO 246
   LENGTH: 7
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: peptide in ml3 coliphage
US-10-052-578-246
 Query Match
                         60.0%; Score 3; DB 12; Length 7;
 Best Local Similarity 100.0%; Pred. No. 6e+05;
 Matches
           3; Conservative 0; Mismatches 0; Indels
                                                                           0;
Qу
           2 VLR 4
             Db
           5 VLR 7
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RESULT 10
US-10-053-520-202
; Sequence 202, Application US/10053520
; Publication No. US20030166530A1
; GENERAL INFORMATION:
; APPLICANT: Sloan-Kettering Institute for Cancer Research
; APPLICANT: Rothman, James E.
; APPLICANT: Mayhew, Mark
; APPLICANT: Hoe, Mee H.
  APPLICANT: Houghton, Alan
  APPLICANT: Hartl, Ulrich
; APPLICANT: Ouerfelli, Ouathek
  APPLICANT: Moroi, Yoichi
  TITLE OF INVENTION: CONJUGATE HEAT SHOCK PROTEIN-BINDING PEPTIDES
  FILE REFERENCE: 11746/46004
  CURRENT APPLICATION NUMBER: US/10/053,520
  CURRENT FILING DATE: 2002-10-01
  PRIOR APPLICATION NUMBER: 08/961,707
; PRIOR FILING DATE: 1997-10-31
; NUMBER OF SEQ ID NOS: 321
  SOFTWARE: WordPerfect 8.0 for Windows
; SEQ ID NO 202
   LENGTH: 7
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: peptide in ml3 coliphage
US-10-053-520-202
  Query Match
                         60.0%; Score 3; DB 12; Length 7;
 Best Local Similarity 100.0%; Pred. No. 6e+05;
 Matches
          3; Conservative 0; Mismatches
                                               0; Indels
                                                                0; Gaps
                                                                            0;
Qу
           2 VLR 4
             | | | |
Db
           4 VLR 6
RESULT 11
US-10-053-520-246
; Sequence 246, Application US/10053520
; Publication No. US20030166530A1
; GENERAL INFORMATION:
  APPLICANT: Sloan-Kettering Institute for Cancer Research
 APPLICANT: Rothman, James E.
  APPLICANT: Mayhew, Mark
  APPLICANT: Hoe, Mee H.
  APPLICANT: Houghton, Alan
  APPLICANT: Hartl, Ulrich
  APPLICANT: Ouerfelli, Ouathek
  APPLICANT: Moroi, Yoichi
  TITLE OF INVENTION: CONJUGATE HEAT SHOCK PROTEIN-BINDING PEPTIDES
  FILE REFERENCE: 11746/46004
  CURRENT APPLICATION NUMBER: US/10/053,520
  CURRENT FILING DATE: 2002-10-01
  PRIOR APPLICATION NUMBER: 08/961,707
  PRIOR FILING DATE: 1997-10-31
```

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; NUMBER OF SEQ ID NOS: 321
  SOFTWARE: WordPerfect 8.0 for Windows
 ; SEQ ID NO 246
    LENGTH: 7
    TYPE: PRT
    ORGANISM: Artificial Sequence
   FEATURE:
    OTHER INFORMATION: peptide in ml3 coliphage
US-10-053-520-246
  Query Match
                          60.0%; Score 3; DB 12; Length 7;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
  Matches
            3; Conservative 0; Mismatches
                                                0; Indels
                                                                0; Gaps
                                                                            0:
Qу
            2 VLR 4
              Dh
            5 VLR 7
RESULT 12
US-10-006-760-34
; Sequence 34, Application US/10006760
; Publication No. US20030186385A1
; GENERAL INFORMATION:
; APPLICANT: Koide, Shohei
  TITLE OF INVENTION: METHOD OF IDENTIFYING POLYPEPTIDE MONOBODIES WHICH BIND
  TITLE OF INVENTION: TO TARGET PROTEINS AND USE THEREOF
  FILE REFERENCE: 176/60901
  CURRENT APPLICATION NUMBER: US/10/006,760
  CURRENT FILING DATE: 2001-11-19
  PRIOR APPLICATION NUMBER: 60/249,756
  PRIOR FILING DATE: 2000-11-17
; NUMBER OF SEQ ID NOS: 73
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 34
   LENGTH: 7
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: Description of Artificial Sequence: AB loop
    OTHER INFORMATION: sequence for polypeptide monobody in pYT45AB7N
    OTHER INFORMATION: library
US-10-006-760-34
  Query Match
                         60.0%; Score 3; DB 12; Length 7;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
 Matches
           3; Conservative 0; Mismatches 0; Indels
                                                               0; Gaps
                                                                           0;
Qу
           2 VLR 4
             Db
           4 VLR 6
RESULT 13
US-10-053-498B-202
; Sequence 202, Application US/10053498B
; Publication No. US20030194409A1
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```
; GENERAL INFORMATION:
; APPLICANT: Sloan-Kettering Institute for Cancer Research
  APPLICANT: Rothman, James E.
  APPLICANT: Mayhew, Mark
; APPLICANT: Hoe, Mee H.
; APPLICANT: Houghton, Alan
; APPLICANT: Hartl, Ulrich
; APPLICANT: Ouerfelli, Ouathek
; APPLICANT: Moroi, Yoichi
  TITLE OF INVENTION: CONJUGATE HEAT SHOCK PROTEIN-BINDING PEPTIDES
 FILE REFERENCE: 11746/46002
  CURRENT APPLICATION NUMBER: US/10/053,498B
  CURRENT FILING DATE: 2002-01-17
; PRIOR APPLICATION NUMBER: 08/961,707
; PRIOR FILING DATE: 1997-10-31
; NUMBER OF SEQ ID NOS: 321
 SOFTWARE: WordPerfect 8.0 for Windows
; SEQ ID NO 202
  LENGTH: 7
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: peptide in m13 coliphage
US-10-053-498B-202
  Query Match
                         60.0%; Score 3; DB 12; Length 7;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
           3; Conservative
                             0; Mismatches
                                               0; Indels
                                                             0; Gaps
                                                                           0;
           2 VLR 4
QУ
             4 VLR 6
RESULT 14
US-10-053-498B-246
; Sequence 246, Application US/10053498B
; Publication No. US20030194409A1
; GENERAL INFORMATION:
; APPLICANT: Sloan-Kettering Institute for Cancer Research
  APPLICANT: Rothman, James E.
  APPLICANT: Mayhew, Mark
; APPLICANT: Hoe, Mee H.
; APPLICANT: Houghton, Alan
; APPLICANT: Hartl, Ulrich
; APPLICANT: Ouerfelli, Ouathek
; APPLICANT: Moroi, Yoichi
  TITLE OF INVENTION: CONJUGATE HEAT SHOCK PROTEIN-BINDING PEPTIDES
; FILE REFERENCE: 11746/46002
  CURRENT APPLICATION NUMBER: US/10/053,498B
; CURRENT FILING DATE: 2002-01-17
; PRIOR APPLICATION NUMBER: 08/961,707
; PRIOR FILING DATE: 1997-10-31
; NUMBER OF SEO ID NOS: 321
; SOFTWARE: WordPerfect 8.0 for Windows
; SEQ ID NO 246
  LENGTH: 7
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TYPE: PRT
    ORGANISM: Artificial Sequence
    OTHER INFORMATION: peptide in m13 coliphage
US-10-053-498B-246
  Query Match
                         60.0%; Score 3; DB 12; Length 7;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
          3; Conservative 0; Mismatches 0; Indels
                                                             0; Gaps
            2 VLR 4
Qу
              Db
            5 VLR 7
RESULT 15
US-10-273-541-55
; Sequence 55, Application US/10273541
; Publication No. US20030077277A1
; GENERAL INFORMATION:
; APPLICANT: Bayer Corporation
; APPLICANT: Takeuchi, Toshi
; TITLE OF INVENTION: Human Antibodies That Have MN Binding and Cell Adhesion-
Neutralizing
; TITLE OF INVENTION: Activity
; FILE REFERENCE: MSB-7289
; CURRENT APPLICATION NUMBER: US/10/273,541
; CURRENT FILING DATE: 2002-10-18
; NUMBER OF SEQ ID NOS: 83
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 55
   LENGTH: 7
   TYPE: PRT
    ORGANISM: Homo sapiens
US-10-273-541-55
  Query Match
                         60.0%; Score 3; DB 15; Length 7;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
           3; Conservative 0; Mismatches 0; Indels 0; Gaps
  Matches
                                                                           0;
           2 VLR 4
Qу
             111
           2 VLR 4
RESULT 16
US-10-052-578-5
; Sequence 5, Application US/10052578
; Publication No. US20030134787A1
; GENERAL INFORMATION:
; APPLICANT: Sloan-Kettering Institute for Cancer Research
; APPLICANT: Rothman, James E.
; APPLICANT: Mayhew, Mark
; APPLICANT: Hoe, Mee H.
; APPLICANT: Houghton, Alan
; APPLICANT: Hartl, Ulrich
; APPLICANT: Ouerfelli, Ouathek
```

```
APPLICANT: Moroi, Yoichi
 TITLE OF INVENTION: CONJUGATE HEAT SHOCK PROTEIN-BINDING PEPTIDES
; FILE REFERENCE: 11746/46003
; CURRENT APPLICATION NUMBER: US/10/052,578
  CURRENT FILING DATE: 2002-01-17
 PRIOR APPLICATION NUMBER: 08/961,707
; PRIOR FILING DATE: 1997-10-31
; NUMBER OF SEQ ID NOS: 321
; SOFTWARE: WordPerfect 8.0 for Windows
; SEQ ID NO 5
  LENGTH: 8
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: peptide in ml3 coliphage
US-10-052-578-5
 Query Match
                         60.0%; Score 3; DB 12; Length 8;
 Best Local Similarity 100.0%; Pred. No. 6e+05;
           3; Conservative 0; Mismatches 0; Indels 0; Gaps
 Matches
           2 VLR 4
Qу
             111
           5 VLR 7
Db
RESULT 17
US-10-283-423-53
; Sequence 53, Application US/10283423
; Publication No. US20030162223A1
; GENERAL INFORMATION:
; APPLICANT: Lowery, David E.
; APPLICANT: Smith, Valdin G.
; APPLICANT: Kubiak, Teresa M.
; APPLICANT: Larsen, Martha J.
  TITLE OF INVENTION: Drosophila G Protein Coupled Receptors, Nucleic Acids,
And Methods
; TITLE OF INVENTION: Related To The Same
; FILE REFERENCE: PHRM0002-102
    Application Project
    ______
  CURRENT APPLICATION NUMBER: US/10/283,423
  CURRENT FILING DATE: 2002-10-30
    Earlier Applications
    ______
 PRIOR APPLICATION NUMBER: PriorAppNumber: 09/693,746
 PRIOR FILING DATE: PriorFilingDate : 2000-10-20
 PRIOR APPLICATION NUMBER: PriorAppNumber: 09/425,676
  PRIOR FILING DATE: PriorFilingDate: 1999-10-22
  NUMBER OF SEQ ID NOS: 187
  SOFTWARE: PatentIn version 3.2
; SEQ ID NO 53
  LENGTH: 8
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: No. US20030162223A1el Sequence
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60.0%; Score 3; DB 12; Length 8;
 Query Match
 Best Local Similarity 100.0%; Pred. No. 6e+05;
           3; Conservative 0; Mismatches 0; Indels
                                                           0; Gaps
                                                                         0;
           2 VLR 4
QУ
            5 VLR 7
Db
RESULT 18
US-10-283-423-108
; Sequence 108, Application US/10283423
; Publication No. US20030162223A1
; GENERAL INFORMATION:
; APPLICANT: Lowery, David E.
; APPLICANT: Smith, Valdin G.
; APPLICANT: Kubiak, Teresa M.
  APPLICANT: Larsen, Martha J.
  TITLE OF INVENTION: Drosophila G Protein Coupled Receptors, Nucleic Acids,
And Methods
; TITLE OF INVENTION: Related To The Same
; FILE REFERENCE: PHRM0002-102
   Application Project
; CURRENT APPLICATION NUMBER: US/10/283,423
  CURRENT FILING DATE: 2002-10-30
   Earlier Applications
   -----
; PRIOR APPLICATION NUMBER: PriorAppNumber : 09/693,746
; PRIOR FILING DATE: PriorFilingDate : 2000-10-20
; PRIOR APPLICATION NUMBER: PriorAppNumber : 09/425,676
; PRIOR FILING DATE: PriorFilingDate : 1999-10-22
; NUMBER OF SEQ ID NOS: 187
  SOFTWARE: PatentIn version 3.2
; SEQ ID NO 108
 LENGTH: 8
  TYPE: PRT
  ORGANISM: Artificial Sequence
   OTHER INFORMATION: No. US20030162223A1el Sequence
US-10-283-423-108
 Query Match
                        60.0%; Score 3; DB 12; Length 8;
 Best Local Similarity 100.0%; Pred. No. 6e+05;
 Matches 3; Conservative 0; Mismatches 0; Indels
                                                           0; Gaps
           2 VLR 4
Qу
             111
           5 VLR 7
Db
RESULT 19
US-10-283-423-111
; Sequence 111, Application US/10283423
; Publication No. US20030162223A1
```

```
; GENERAL INFORMATION:
; APPLICANT: Lowery, David E.
; APPLICANT: Smith, Valdin G.
; APPLICANT: Kubiak, Teresa M.
; APPLICANT: Larsen, Martha J.
  TITLE OF INVENTION: Drosophila G Protein Coupled Receptors, Nucleic Acids,
And Methods
  TITLE OF INVENTION: Related To The Same
  FILE REFERENCE: PHRM0002-102
    Application Project
  CURRENT APPLICATION NUMBER: US/10/283,423
  CURRENT FILING DATE: 2002-10-30
  Earlier Applications
    ______
 PRIOR APPLICATION NUMBER: PriorAppNumber: 09/693,746
 PRIOR FILING DATE: PriorFilingDate : 2000-10-20
 PRIOR APPLICATION NUMBER: PriorAppNumber: 09/425,676
  PRIOR FILING DATE: PriorFilingDate : 1999-10-22
; NUMBER OF SEQ ID NOS: 187
  SOFTWARE: PatentIn version 3.2
; SEQ ID NO 111
  LENGTH: 8
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
    OTHER INFORMATION: No. US20030162223A1el Sequence
US-10-283-423-111
                         60.0%; Score 3; DB 12; Length 8;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 6e+05;
                                                              0; Gaps
         3; Conservative 0; Mismatches
                                              0; Indels
                                                                          0;
           2 VLR 4
Qу
             111
           5 VLR 7
Db
RESULT 20
US-10-283-423-113
; Sequence 113, Application US/10283423
; Publication No. US20030162223A1
; GENERAL INFORMATION:
; APPLICANT: Lowery, David E.
; APPLICANT: Smith, Valdin G.
; APPLICANT: Kubiak, Teresa M.
; APPLICANT: Larsen, Martha J.
  TITLE OF INVENTION: Drosophila G Protein Coupled Receptors, Nucleic Acids,
And Methods
; TITLE OF INVENTION: Related To The Same
  FILE REFERENCE: PHRM0002-102
; Application Project
; CURRENT APPLICATION NUMBER: US/10/283,423
 CURRENT FILING DATE: 2002-10-30
   Earlier Applications
    _______
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PRIOR APPLICATION NUMBER: PriorAppNumber: 09/693,746
   PRIOR FILING DATE: PriorFilingDate : 2000-10-20
  PRIOR APPLICATION NUMBER: PriorAppNumber: 09/425,676
   PRIOR FILING DATE: PriorFilingDate : 1999-10-22
; NUMBER OF SEQ ID NOS: 187
; SOFTWARE: PatentIn version 3.2
; SEQ ID NO 113
   LENGTH: 8
   TYPE: PRT
   ORGANISM: Artificial Sequence
    FEATURE:
    OTHER INFORMATION: No. US20030162223A1el Sequence
US-10-283-423-113
  Query Match
                          60.0%; Score 3; DB 12; Length 8;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
  Matches
            3; Conservative 0; Mismatches
                                                                0; Gaps
                                                0; Indels
                                                                            0;
Qу
            2 VLR 4
              \Pi\Pi
Db
            5 VLR 7
RESULT 21
US-10-283-423-122
; Sequence 122, Application US/10283423
; Publication No. US20030162223A1
; GENERAL INFORMATION:
  APPLICANT: Lowery, David E.
  APPLICANT: Smith, Valdin G.
  APPLICANT: Kubiak, Teresa M.
  APPLICANT: Larsen, Martha J.
  TITLE OF INVENTION: Drosophila G Protein Coupled Receptors, Nucleic Acids,
And Methods
  TITLE OF INVENTION: Related To The Same
  FILE REFERENCE: PHRM0002-102
   Application Project
   CURRENT APPLICATION NUMBER: US/10/283,423
   CURRENT FILING DATE: 2002-10-30
    Earlier Applications
    ------
  PRIOR APPLICATION NUMBER: PriorAppNumber: 09/693,746
  PRIOR FILING DATE: PriorFilingDate : 2000-10-20
  PRIOR APPLICATION NUMBER: PriorAppNumber: 09/425,676
  PRIOR FILING DATE: PriorFilingDate : 1999-10-22
  NUMBER OF SEQ ID NOS: 187
  SOFTWARE: PatentIn version 3.2
; SEQ ID NO 122
   LENGTH: 8
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: No. US20030162223A1el Sequence
US-10-283-423-122
 Query Match
                        60.0%; Score 3; DB 12; Length 8;
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Best Local Similarity 100.0%; Pred. No. 6e+05;
 Matches
          3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                          0;
Qу
           2 VLR 4
             5 VLR 7
Db
RESULT 22
US-10-283-423-129
; Sequence 129, Application US/10283423
; Publication No. US20030162223A1
; GENERAL INFORMATION:
  APPLICANT: Lowery, David E.
  APPLICANT: Smith, Valdin G.
; APPLICANT: Kubiak, Teresa M.
; APPLICANT: Larsen, Martha J.
  TITLE OF INVENTION: Drosophila G Protein Coupled Receptors, Nucleic Acids,
And Methods
  TITLE OF INVENTION: Related To The Same
 FILE REFERENCE: PHRM0002-102
   Application Project
  CURRENT APPLICATION NUMBER: US/10/283,423
  CURRENT FILING DATE: 2002-10-30
   Earlier Applications
    ______
  PRIOR APPLICATION NUMBER: PriorAppNumber: 09/693,746
  PRIOR FILING DATE: PriorFilingDate : 2000-10-20
  PRIOR APPLICATION NUMBER: PriorAppNumber: 09/425,676
; PRIOR FILING DATE: PriorFilingDate : 1999-10-22
; NUMBER OF SEQ ID NOS: 187
 SOFTWARE: PatentIn version 3.2
; SEQ ID NO 129
  LENGTH: 8
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: No. US20030162223A1el Sequence
US-10-283-423-129
 Query Match
                         60.0%; Score 3; DB 12; Length 8;
 Best Local Similarity 100.0%; Pred. No. 6e+05;
                                                                          0;
 Matches
           3; Conservative 0; Mismatches 0; Indels
                                                              0; Gaps
           2 VLR 4
Qу
             111
Db
           5 VLR 7
RESULT 23
US-10-053-520-5
; Sequence 5, Application US/10053520
; Publication No. US20030166530A1
; GENERAL INFORMATION:
; APPLICANT: Sloan-Kettering Institute for Cancer Research
; APPLICANT: Rothman, James E.
```

```
; APPLICANT: Mayhew, Mark
; APPLICANT: Hoe, Mee H.
  APPLICANT: Houghton, Alan
   APPLICANT: Hartl, Ulrich
   APPLICANT: Ouerfelli, Ouathek
  APPLICANT: Moroi, Yoichi
  TITLE OF INVENTION: CONJUGATE HEAT SHOCK PROTEIN-BINDING PEPTIDES
; FILE REFERENCE: 11746/46004
; CURRENT APPLICATION NUMBER: US/10/053,520
; CURRENT FILING DATE: 2002-10-01
  PRIOR APPLICATION NUMBER: 08/961,707
  PRIOR FILING DATE: 1997-10-31
; NUMBER OF SEQ ID NOS: 321
  SOFTWARE: WordPerfect 8.0 for Windows
; SEQ ID NO 5
    LENGTH: 8
    TYPE: PRT
    ORGANISM: Artificial Sequence
    FEATURE:
    OTHER INFORMATION: peptide in m13 coliphage
US-10-053-520-5
  Query Match
                          60.0%; Score 3; DB 12; Length 8;
  Best Local Similarity
                          100.0%; Pred. No. 6e+05;
            3; Conservative 0; Mismatches
                                                0; Indels
                                                                0; Gaps
                                                                            0;
Qу
            2 VLR 4
              5 VLR 7
RESULT 24
US-10-213-821-53
; Sequence 53, Application US/10213821
; Publication No. US20030180297A1
; GENERAL INFORMATION:
  APPLICANT: Pharmacia & Upjphn
  APPLICANT: Lowery, David E.
  APPLICANT: Smith, Valdin G.
  APPLICANT: Kubiak, Teresa M.
  APPLICANT: Larsen, Martha J.
  TITLE OF INVENTION: Drosophila G Protein Coupled Receptors, Nucleic Acids,
And Methods
  TITLE OF INVENTION: Related To The Same
  FILE REFERENCE: 6297.2cp
  CURRENT APPLICATION NUMBER: US/10/213,821
  CURRENT FILING DATE: 2003-01-21
  PRIOR APPLICATION NUMBER: 09/693,746
  PRIOR FILING DATE: 2000-10-20
  PRIOR APPLICATION NUMBER: 09/425,676
  PRIOR FILING DATE: 1999-10-22
  NUMBER OF SEQ ID NOS: 185
  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 53
   LENGTH: 8
   TYPE: PRT
   ORGANISM: Artificial Sequence
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; FEATURE:
; OTHER INFORMATION: No. US20030180297A1el Sequence
US-10-213-821-53
  Query Match
                         60.0%; Score 3; DB 12; Length 8;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
  Matches 3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                         0;
            2 VLR 4
Qу
             Db
           5 VLR 7
RESULT 25
US-10-213-821-108
; Sequence 108, Application US/10213821
; Publication No. US20030180297A1
; GENERAL INFORMATION:
; APPLICANT: Pharmacia & Upjphn
; APPLICANT: Lowery, David E.
; APPLICANT: Smith, Valdin G.
; APPLICANT: Kubiak, Teresa M.
; APPLICANT: Larsen, Martha J.
  TITLE OF INVENTION: Drosophila G Protein Coupled Receptors, Nucleic Acids,
And Methods
; TITLE OF INVENTION: Related To The Same
; FILE REFERENCE: 6297.2cp
; CURRENT APPLICATION NUMBER: US/10/213,821
  CURRENT FILING DATE: 2003-01-21
  PRIOR APPLICATION NUMBER: 09/693,746
; PRIOR FILING DATE: 2000-10-20
; PRIOR APPLICATION NUMBER: 09/425,676
; PRIOR FILING DATE: 1999-10-22
; NUMBER OF SEQ ID NOS: 185
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 108
   LENGTH: 8
   TYPE: PRT
   ORGANISM: Artificial Sequence
   OTHER INFORMATION: No. US20030180297A1el Sequence
US-10-213-821-108
  Query Match
                         60.0%; Score 3; DB 12; Length 8;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
 Matches
          3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                         0;
           2 VLR 4
Qу
             111
Db
           5 VLR 7
RESULT 26
US-10-213-821-111
; Sequence 111, Application US/10213821
; Publication No. US20030180297A1
; GENERAL INFORMATION:
```

```
; APPLICANT: Pharmacia & Upjphn
; APPLICANT: Lowery, David E.
; APPLICANT: Smith, Valdin G.
; APPLICANT: Kubiak, Teresa M.
; APPLICANT: Larsen, Martha J.
; TITLE OF INVENTION: Drosophila G Protein Coupled Receptors, Nucleic Acids,
And Methods
; TITLE OF INVENTION: Related To The Same
; FILE REFERENCE: 6297.2cp
; CURRENT APPLICATION NUMBER: US/10/213,821
; CURRENT FILING DATE: 2003-01-21
; PRIOR APPLICATION NUMBER: 09/693,746
; PRIOR FILING DATE: 2000-10-20
 PRIOR APPLICATION NUMBER: 09/425,676
; PRIOR FILING DATE: 1999-10-22
 NUMBER OF SEQ ID NOS: 185
  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 111
  LENGTH: 8
   TYPE: PRT
   ORGANISM: Artificial Sequence
  FEATURE:
   OTHER INFORMATION: No. US20030180297A1el Sequence
US-10-213-821-111
  Query Match
                         60.0%; Score 3; DB 12; Length 8;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
 Matches
          3; Conservative 0; Mismatches
                                               0; Indels 0; Gaps
                                                                           0;
QУ
           2 VLR 4
             Dh
           5 VLR 7
RESULT 27
US-10-213-821-113
; Sequence 113, Application US/10213821
; Publication No. US20030180297A1
; GENERAL INFORMATION:
; APPLICANT: Pharmacia & Upjphn
; APPLICANT: Lowery, David E.
; APPLICANT: Smith, Valdin G.
  APPLICANT: Kubiak, Teresa M.
; APPLICANT: Larsen, Martha J.
; TITLE OF INVENTION: Drosophila G Protein Coupled Receptors, Nucleic Acids,
And Methods
; TITLE OF INVENTION: Related To The Same
; FILE REFERENCE: 6297.2cp
; CURRENT APPLICATION NUMBER: US/10/213,821
 CURRENT FILING DATE: 2003-01-21
; PRIOR APPLICATION NUMBER: 09/693,746
; PRIOR FILING DATE: 2000-10-20
; PRIOR APPLICATION NUMBER: 09/425,676
; PRIOR FILING DATE: 1999-10-22
; NUMBER OF SEQ ID NOS: 185
 SOFTWARE: PatentIn version 3.1
; SEQ ID NO 113
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LENGTH: 8
    TYPE: PRT
    ORGANISM: Artificial Sequence
    FEATURE:
    OTHER INFORMATION: No. US20030180297Alel Sequence
US-10-213-821-113
  Query Match
                          60.0%; Score 3; DB 12; Length 8;
  Best Local Similarity
                          100.0%; Pred. No. 6e+05;
            3; Conservative 0; Mismatches
                                                0; Indels
                                                                0; Gaps
                                                                            0;
QУ
            2 VLR 4
              | | | |
            5 VLR 7
RESULT 28
US-10-213-821-122
; Sequence 122, Application US/10213821
; Publication No. US20030180297A1
; GENERAL INFORMATION:
  APPLICANT: Pharmacia & Upjphn
  APPLICANT: Lowery, David E.
; APPLICANT: Smith, Valdin G.
  APPLICANT: Kubiak, Teresa M.
  APPLICANT: Larsen, Martha J.
  TITLE OF INVENTION: Drosophila G Protein Coupled Receptors, Nucleic Acids,
And Methods
  TITLE OF INVENTION: Related To The Same
  FILE REFERENCE: 6297.2cp
  CURRENT APPLICATION NUMBER: US/10/213,821
  CURRENT FILING DATE: 2003-01-21
  PRIOR APPLICATION NUMBER: 09/693,746
  PRIOR FILING DATE: 2000-10-20
  PRIOR APPLICATION NUMBER: 09/425,676
  PRIOR FILING DATE: 1999-10-22
  NUMBER OF SEQ ID NOS: 185
  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 122
   LENGTH: 8
    TYPE: PRT
   ORGANISM: Artificial Sequence
    OTHER INFORMATION: No. US20030180297A1el Sequence
US-10-213-821-122
 Query Match
                         60.0%; Score 3; DB 12; Length 8;
 Best Local Similarity
                         100.0%; Pred. No. 6e+05;
 Matches
           3; Conservative 0; Mismatches 0; Indels
                                                             0; Gaps
Qу
           2 VLR 4
              Db
           5 VLR 7
```

RESULT 29 US-10-213-821-129

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; Sequence 129, Application US/10213821
; Publication No. US20030180297A1
; GENERAL INFORMATION:
; APPLICANT: Pharmacia & Upjphn
; APPLICANT: Lowery, David E.
; APPLICANT: Smith, Valdin G.
; APPLICANT: Kubiak, Teresa M.
; APPLICANT: Larsen, Martha J.
  TITLE OF INVENTION: Drosophila G Protein Coupled Receptors, Nucleic Acids,
And Methods
; TITLE OF INVENTION: Related To The Same
; FILE REFERENCE: 6297.2cp
; CURRENT APPLICATION NUMBER: US/10/213,821
  CURRENT FILING DATE: 2003-01-21
  PRIOR APPLICATION NUMBER: 09/693,746
  PRIOR FILING DATE: 2000-10-20
  PRIOR APPLICATION NUMBER: 09/425,676
; PRIOR FILING DATE: 1999-10-22
; NUMBER OF SEO ID NOS: 185
  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 129
   LENGTH: 8
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: No. US20030180297A1el Sequence
US-10-213-821-129
  Query Match
                         60.0%; Score 3; DB 12; Length 8;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
  Matches
          3; Conservative 0; Mismatches 0; Indels
                                                              0; Gaps
           2 VLR 4
Qу
              \perp
           5 VLR 7
Db
RESULT 30
US-10-053-498B-5
; Sequence 5, Application US/10053498B
; Publication No. US20030194409A1
; GENERAL INFORMATION:
; APPLICANT: Sloan-Kettering Institute for Cancer Research
; APPLICANT: Rothman, James E.
  APPLICANT: Mayhew, Mark
  APPLICANT: Hoe, Mee H.
  APPLICANT: Houghton, Alan
  APPLICANT: Hartl, Ulrich
  APPLICANT: Ouerfelli, Ouathek
  APPLICANT: Moroi, Yoichi
  TITLE OF INVENTION: CONJUGATE HEAT SHOCK PROTEIN-BINDING PEPTIDES
  FILE REFERENCE: 11746/46002
  CURRENT APPLICATION NUMBER: US/10/053,498B
  CURRENT FILING DATE: 2002-01-17
  PRIOR APPLICATION NUMBER: 08/961,707
 PRIOR FILING DATE: 1997-10-31
; NUMBER OF SEQ ID NOS: 321
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; SOFTWARE: WordPerfect 8.0 for Windows
 ; SEQ ID NO 5
    LENGTH: 8
    TYPE: PRT
    ORGANISM: Artificial Sequence
    OTHER INFORMATION: peptide in ml3 coliphage
US-10-053-498B-5
  Query Match
                          60.0%; Score 3; DB 12; Length 8;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
           3; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
                                                                            0;
Qу
            2 VLR 4
              III
Db
            5 VLR 7
RESULT 31
US-10-139-496-10
; Sequence 10, Application US/10139496
; Publication No. US20030082646A1
; GENERAL INFORMATION:
; APPLICANT: Carey, Thomas E.
; APPLICANT: Nair, Thankum S.
  APPLICANT: Gray, Jennifer P.
  TITLE OF INVENTION: Antigenic Targets of Autoimmune Sensorineural Hearing
Loss (AISNHL) and
; TITLE OF INVENTION: Development of Tests for Diagnosis and Management of
AISNHL
; FILE REFERENCE: UM-6982
  CURRENT APPLICATION NUMBER: US/10/139,496
  CURRENT FILING DATE: 2002-09-10
; PRIOR APPLICATION NUMBER: 09/222,179
  PRIOR FILING DATE: 1998-12-29
; NUMBER OF SEQ ID NOS: 36
  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 10
   LENGTH: 8
   TYPE: PRT
   ORGANISM: Artificial Sequence
    FEATURE:
    OTHER INFORMATION: Synthetic
US-10-139-496-10
  Query Match
                         60.0%; Score 3; DB 15; Length 8;
  Best Local Similarity
                         100.0%; Pred. No. 6e+05;
           3; Conservative 0; Mismatches 0; Indels 0; Gaps
 Matches
                                                                            0;
Qу
            2 VLR 4
              111
Db
           6 VLR 8
RESULT 32
US-09-760-599-42
; Sequence 42, Application US/09760599
```

```
; Patent No. US20010034326A1
; GENERAL INFORMATION:
  APPLICANT: Larson Mr., Richard S.
; TITLE OF INVENTION: Peptide Inhibitors of LFA-1/CAM-1 Interaction
; FILE REFERENCE: SCI200/4-1CIP
; CURRENT APPLICATION NUMBER: US/09/760,599
; CURRENT FILING DATE: 2001-01-17
; NUMBER OF SEQ ID NOS: 56
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 42
  LENGTH: 9
   TYPE: PRT
    ORGANISM: Artificial Sequence
    FEATURE:
    OTHER INFORMATION: Description of Artificial Sequence:Synthetic
US-09-760-599-42
  Query Match
                         60.0%; Score 3; DB 9; Length 9;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
           3; Conservative 0; Mismatches 0; Indels 0; Gaps
            2 VLR 4
Qу
             -111
           2 VLR 4
RESULT 33
US-09-192-854-131
; Sequence 131, Application US/09192854
; Patent No. US20020068276A1
; GENERAL INFORMATION:
; APPLICANT: Winter, Greg
; APPLICANT: Tomlinson, Ian
; TITLE OF INVENTION: Methods for Selecting Functional Peptides
; FILE REFERENCE: 3789/72916
; CURRENT APPLICATION NUMBER: US/09/192,854
; CURRENT FILING DATE: 1998-11-17
; EARLIER APPLICATION NUMBER: 60/066,729
; EARLIER FILING DATE: 1997-11-21
; NUMBER OF SEQ ID NOS: 212
; SOFTWARE: PatentIn Ver. 2.0
; SEQ ID NO 131
   LENGTH: 9
   TYPE: PRT
   ORGANISM: Homo sapiens
US-09-192-854-131
 Query Match
                         60.0%; Score 3; DB 9; Length 9;
 Best Local Similarity 100.0%; Pred. No. 6e+05;
 Matches 3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                          0;
Qу
           2 VLR 4
             Db
           4 VLR 6
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```
US-09-780-053-338
; Sequence 338, Application US/09780053
; Patent No. US20020102640A1
; GENERAL INFORMATION:
; APPLICANT: Rene S. Hubert
; APPLICANT: Daniel E.H. Afar
; APPLICANT: Pia M. Challita-Eid
; APPLICANT: Mary Faris
  APPLICANT: Elana Levin
  APPLICANT: Steve Chappell Mitchell
APPLICANT: Aya Jakobovits
  TITLE OF INVENTION: 83P5G4: A TISSUE SPECIFIC PROTEIN
  TITLE OF INVENTION: HIGHLY EXPRESSED IN PROSTATE CANCER
  FILE REFERENCE: 129.5USU1
  CURRENT APPLICATION NUMBER: US/09/780,053
  CURRENT FILING DATE: 2001-02-09
  PRIOR APPLICATION NUMBER: 60/181,261
; PRIOR FILING DATE: 2000-02-09
; NUMBER OF SEQ ID NOS: 716
  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 338
   LENGTH: 9
    TYPE: PRT
    ORGANISM: Homo Sapiens
US-09-780-053-338
  Query Match
                          60.0%; Score 3; DB 10; Length 9;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
  Matches
           3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0:
QУ
            2 VLR 4
              Db
            7 VLR 9
RESULT 35
US-09-968-561A-234
; Sequence 234, Application US/09968561A
; Patent No. US20020164642A1
; GENERAL INFORMATION:
; APPLICANT: Tomlinson, Ian M
  APPLICANT: Winter, Gregory
  TITLE OF INVENTION: Method to Screen Phage Display Libraries with Different
Ligands
; FILE REFERENCE: 8039/1073B
  CURRENT APPLICATION NUMBER: US/09/968,561A
  CURRENT FILING DATE: 2001-10-01
; PRIOR APPLICATION NUMBER: GB 9722131.1
  PRIOR FILING DATE: 1997-10-20
  PRIOR APPLICATION NUMBER: US 60/065,248
  PRIOR FILING DATE: 1997-11-13
  PRIOR APPLICATION NUMBER: US 60/066,729
  PRIOR FILING DATE: 1997-11-21
 PRIOR APPLICATION NUMBER: PCT/GB98/03135
 PRIOR FILING DATE: 1998-10-20
  PRIOR APPLICATION NUMBER: US 09/511,939
  PRIOR FILING DATE: 2000-02-24
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; NUMBER OF SEQ ID NOS: 350
; SOFTWARE: PatentIn version 3.1
; SEQ ID NO 234
  LENGTH: 9
   TYPE: PRT
   ORGANISM: Homo sapiens
US-09-968-561A-234
                         60.0%; Score 3; DB 10; Length 9;
 Query Match
 Best Local Similarity 100.0%; Pred. No. 6e+05;
          3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                          0;
 Matches
           2 VLR 4
Qy
             111
Db
           4 VLR 6
RESULT 36
US-09-821-734-11
; Sequence 11, Application US/09821734
; Publication No. US20030027246A1
; GENERAL INFORMATION:
; APPLICANT: Chong, Pele
; APPLICANT: Pedyczak, Artur
; APPLICANT: Sia, Charles Dwo Yuan
; TITLE OF INVENTION: Immunogenic Peptides Derived from Prostate-Specific
Membrane Antigen
; TITLE OF INVENTION: (PSMA) and Uses Thereof
; FILE REFERENCE: 11014-22
; CURRENT APPLICATION NUMBER: US/09/821,734
; CURRENT FILING DATE: 2001-03-30
; PRIOR APPLICATION NUMBER: US 60/193,386
; PRIOR FILING DATE: 2000-03-31
; NUMBER OF SEQ ID NOS: 24
; SOFTWARE: PatentIn version 3.0
; SEQ ID NO 11
  LENGTH: 9
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
  OTHER INFORMATION: CLP335
US-09-821-734-11
                        60.0%; Score 3; DB 11; Length 9;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 6e+05;
           3; Conservative 0; Mismatches 0; Indels 0; Gaps
  Matches
           2 VLR 4
Qу
             1 VLR 3
Db
RESULT 37
US-09-809-638-29
; Sequence 29, Application US/09809638
; Publication No. US20030059895A1
; GENERAL INFORMATION:
```

```
; APPLICANT: Mary Faris
; APPLICANT: Pia M. Challita-Eid
; APPLICANT: Steve Chappell Mitchell
; APPLICANT: Daniel E.H. Afar
; APPLICANT: Arthur B. Raitano
; APPLICANT: Aya Jakobovits
  TITLE OF INVENTION: 125P5C8: A TISSUE SPECIFIC PROTEIN
  TITLE OF INVENTION: HIGHLY EXPRESSED IN VARIOUS CANCERS
  FILE REFERENCE: 129.35US01
; CURRENT APPLICATION NUMBER: US/09/809,638
; CURRENT FILING DATE: 2001-03-14
; NUMBER OF SEQ ID NOS: 746
 SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 29
   LENGTH: 9
   TYPE: PRT
   ORGANISM: Homo sapiens
US-09-809-638-29
  Query Match
                         60.0%; Score 3; DB 11; Length 9;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
           3; Conservative 0; Mismatches 0; Indels 0; Gaps
  Matches
                                                                          0;
QУ
           2 VLR 4
             4 VLR 6
RESULT 38
US-09-809-638-133
; Sequence 133, Application US/09809638
; Publication No. US20030059895A1
; GENERAL INFORMATION:
; APPLICANT: Mary Faris
  APPLICANT: Pia M. Challita-Eid
; APPLICANT: Steve Chappell Mitchell
; APPLICANT: Daniel E.H. Afar
  APPLICANT: Arthur B. Raitano
  APPLICANT: Aya Jakobovits
  TITLE OF INVENTION: 125P5C8: A TISSUE SPECIFIC PROTEIN
  TITLE OF INVENTION: HIGHLY EXPRESSED IN VARIOUS CANCERS
  FILE REFERENCE: 129.35US01
; CURRENT APPLICATION NUMBER: US/09/809,638
; CURRENT FILING DATE: 2001-03-14
; NUMBER OF SEQ ID NOS: 746
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 133
   LENGTH: 9
   TYPE: PRT
   ORGANISM: Homo sapiens
US-09-809-638-133
 Query Match
                        60.0%; Score 3; DB 11; Length 9;
 Best Local Similarity 100.0%; Pred. No. 6e+05;
 Matches
         3; Conservative 0; Mismatches 0; Indels
                                                              0; Gaps
```

```
\perp \perp \perp
Db
            3 VLR 5
RESULT 39
US-09-809-638-231
; Sequence 231, Application US/09809638
; Publication No. US20030059895A1
; GENERAL INFORMATION:
  APPLICANT: Mary Faris
  APPLICANT: Pia M. Challita-Eid
  APPLICANT: Steve Chappell Mitchell
  APPLICANT: Daniel E.H. Afar
  APPLICANT: Arthur B. Raitano
   APPLICANT: Aya Jakobovits
   TITLE OF INVENTION: 125P5C8: A TISSUE SPECIFIC PROTEIN
  TITLE OF INVENTION: HIGHLY EXPRESSED IN VARIOUS CANCERS
  FILE REFERENCE: 129.35US01
  CURRENT APPLICATION NUMBER: US/09/809,638
  CURRENT FILING DATE: 2001-03-14
; NUMBER OF SEQ ID NOS: 746
  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 231
    LENGTH: 9
    TYPE: PRT
    ORGANISM: Homo sapiens
US-09-809-638-231
  Query Match
                          60.0%; Score 3; DB 11; Length 9;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
  Matches
           3; Conservative 0; Mismatches
                                                                0; Gaps
                                                0; Indels
                                                                             0;
            2 VLR 4
Qу
              Db
            4 VLR 6
RESULT 40
US-09-809-638-326
; Sequence 326, Application US/09809638
; Publication No. US20030059895A1
; GENERAL INFORMATION:
  APPLICANT: Mary Faris
  APPLICANT: Pia M. Challita-Eid
  APPLICANT: Steve Chappell Mitchell
  APPLICANT: Daniel E.H. Afar
  APPLICANT: Arthur B. Raitano
  APPLICANT: Aya Jakobovits
  TITLE OF INVENTION: 125P5C8: A TISSUE SPECIFIC PROTEIN
  TITLE OF INVENTION: HIGHLY EXPRESSED IN VARIOUS CANCERS
  FILE REFERENCE: 129.35US01
```

CURRENT APPLICATION NUMBER: US/09/809,638

SOFTWARE: FastSEQ for Windows Version 4.0

2001-03-14

CURRENT FILING DATE:

; SEQ ID NO 326 ; LENGTH: 9

NUMBER OF SEQ ID NOS: 746

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TYPE: PRT
  ORGANISM: Homo sapiens
US-09-809-638-326
  Query Match
                          60.0%; Score 3; DB 11; Length 9;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
            3; Conservative 0; Mismatches 0; Indels
  Matches
                                                                   0; Gaps
                                                                               0;
Qу
            2 VLR 4
              Dh
            7 VLR 9
RESULT 41
US-09-809-638-524
; Sequence 524, Application US/09809638
; Publication No. US20030059895A1
; GENERAL INFORMATION:
; APPLICANT: Mary Faris
; APPLICANT: Pia M. Challita-Eid
; APPLICANT: Steve Chappell Mitchell
; APPLICANT: Daniel E.H. Afar
; APPLICANT: Arthur B. Raitano
  APPLICANT: Aya Jakobovits
  TITLE OF INVENTION: 125P5C8: A TISSUE SPECIFIC PROTEIN
  TITLE OF INVENTION: HIGHLY EXPRESSED IN VARIOUS CANCERS
  FILE REFERENCE: 129.35US01
  CURRENT APPLICATION NUMBER: US/09/809,638
  CURRENT FILING DATE: 2001-03-14
; NUMBER OF SEQ ID NOS: 746
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 524
   LENGTH: 9
   TYPE: PRT
   ORGANISM: Homo sapiens
US-09-809-638-524
  Query Match
                          60.0%; Score 3; DB 11; Length 9;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
           3; Conservative 0; Mismatches 0; Indels 0; Gaps
 Matches
            2 VLR 4
Qу
             Db
            1 VLR 3
RESULT 42
US-09-809-638-663
; Sequence 663, Application US/09809638
; Publication No. US20030059895A1
; GENERAL INFORMATION:
; APPLICANT: Mary Faris
; APPLICANT: Pia M. Challita-Eid
; APPLICANT: Steve Chappell Mitchell; APPLICANT: Daniel E.H. Afar; APPLICANT: Arthur B. Raitano
; APPLICANT: Aya Jakobovits
```

```
TITLE OF INVENTION: 125P5C8: A TISSUE SPECIFIC PROTEIN
  TITLE OF INVENTION: HIGHLY EXPRESSED IN VARIOUS CANCERS
; FILE REFERENCE: 129.35US01
  CURRENT APPLICATION NUMBER: US/09/809,638
; CURRENT FILING DATE: 2001-03-14
; NUMBER OF SEQ ID NOS: 746
 SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 663
   LENGTH: 9
   TYPE: PRT
   ORGANISM: Homo sapiens
US-09-809-638-663
  Query Match
                         60.0%; Score 3; DB 11; Length 9;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
  Matches
          3; Conservative 0; Mismatches 0; Indels
                                                               0; Gaps
                                                                           0:
Qу
            2 VLR 4
             Db
           1 VLR 3
RESULT 43
US-09-978-309A-66
; Sequence 66, Application US/09978309A
; Publication No. US20030100490A1
; GENERAL INFORMATION:
; APPLICANT: Cruz, Tony
  APPLICANT: Pastrak, Aleksandra
  APPLICANT: Turley, Eva A.
  TITLE OF INVENTION: Compositions and Methods for Treating Cellular Response
to
  TITLE OF INVENTION: Injury and Other Proliferating Cell Disorders Regulated
by
  TITLE OF INVENTION: Hyaladherin and Hyaluronans
  FILE REFERENCE: 033352-010
  CURRENT APPLICATION NUMBER: US/09/978,309A
  CURRENT FILING DATE: 2002-04-04
  PRIOR APPLICATION NUMBER: US 09/685,010
  PRIOR FILING DATE: 2000-10-05
  PRIOR APPLICATION NUMBER: US 09/541,522
  PRIOR FILING DATE: 2000-04-03
  PRIOR APPLICATION NUMBER: US 60/127,457
  PRIOR FILING DATE: 1999-04-01
; NUMBER OF SEQ ID NOS: 84
  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 66
   LENGTH: 9
   TYPE: PRT
   ORGANISM: Homo sapien
US-09-978-309A-66
 Query Match
                         60.0%; Score 3; DB 11; Length 9;
 Best Local Similarity 100.0%; Pred. No. 6e+05;
 Matches
          3; Conservative 0; Mismatches 0; Indels 0; Gaps
```

```
Db
           7 VLR 9
RESULT 44
US-10-141-645-93
; Sequence 93, Application US/10141645
; Publication No. US20030144184A1
; GENERAL INFORMATION:
  APPLICANT: Robert Lehrer
  APPLICANT: Alan Waring
  APPLICANT: Alexander Cole
  APPLICANT: Teresa Hong
  TITLE OF INVENTION: Retrocyclins - Antiviral and
   TITLE OF INVENTION: Antimicrobial Peptides
  FILE REFERENCE: UCLA-001CIP
  CURRENT APPLICATION NUMBER: US/10/141,645
  CURRENT FILING DATE: 2002-05-06
  PRIOR APPLICATION NUMBER: 60/284,855
  PRIOR FILING DATE: 2001-04-18
  PRIOR APPLICATION NUMBER: Unassigned
  PRIOR FILING DATE: 2002-04-18
  NUMBER OF SEQ ID NOS: 125
   SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 93
   LENGTH: 9
   TYPE: PRT
    ORGANISM: Artificial Sequence
    OTHER INFORMATION: expansion of variant residues.
US-10-141-645-93
  Query Match
                         60.0%; Score 3; DB 12; Length 9;
 Best Local Similarity
                         100.0%; Pred. No. 6e+05;
            3; Conservative 0; Mismatches
 Matches
                                               0; Indels
                                                                0; Gaps
                                                                            0;
Qу
            2 VLR 4
             Db
           5 VLR 7
RESULT 45
US-10-141-645-105
; Sequence 105, Application US/10141645
; Publication No. US20030144184A1
; GENERAL INFORMATION:
; APPLICANT: Robert Lehrer
  APPLICANT: Alan Waring
  APPLICANT: Alexander Cole
  APPLICANT: Teresa Hong
  TITLE OF INVENTION: Retrocyclins - Antiviral and
  TITLE OF INVENTION: Antimicrobial Peptides
  FILE REFERENCE: UCLA-001CIP
  CURRENT APPLICATION NUMBER: US/10/141,645
  CURRENT FILING DATE: 2002-05-06
  PRIOR APPLICATION NUMBER: 60/284,855
```

; PRIOR FILING DATE: 2001-04-18

```
; PRIOR APPLICATION NUMBER: Unassigned
; PRIOR FILING DATE: 2002-04-18
; NUMBER OF SEQ ID NOS: 125
 SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 105
   LENGTH: 9
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
    OTHER INFORMATION: expansion of variant residues.
US-10-141-645-105
  Query Match
                         60.0%; Score 3; DB 12; Length 9;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
  Matches
          3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                         0;
Qу
            2 VLR 4
              111
Db
            5 VLR 7
RESULT 46
US-10-141-645-112
; Sequence 112, Application US/10141645
; Publication No. US20030144184A1
; GENERAL INFORMATION:
; APPLICANT: Robert Lehrer
; APPLICANT: Alan Waring
  APPLICANT: Alexander Cole
APPLICANT: Teresa Hong
  TITLE OF INVENTION: Retrocyclins - Antiviral and
; TITLE OF INVENTION: Antimicrobial Peptides
; FILE REFERENCE: UCLA-001CIP
; CURRENT APPLICATION NUMBER: US/10/141,645
  CURRENT FILING DATE: 2002-05-06
; PRIOR APPLICATION NUMBER: 60/284,855
; PRIOR FILING DATE: 2001-04-18
; PRIOR APPLICATION NUMBER: Unassigned
; PRIOR FILING DATE: 2002-04-18
; NUMBER OF SEQ ID NOS: 125
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 112
   LENGTH: 9
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: expansion of variant residues.
US-10-141-645-112
  Query Match
                         60.0%; Score 3; DB 12; Length 9;
 Best Local Similarity 100.0%; Pred. No. 6e+05;
 Matches 3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                          0;
           2 VLR 4
QУ
             111
           5 VLR 7
Db
```

```
RESULT 47
US-10-141-645-113
; Sequence 113, Application US/10141645
; Publication No. US20030144184A1
; GENERAL INFORMATION:
; APPLICANT: Robert Lehrer
; APPLICANT: Alan Waring
  APPLICANT: Alexander Cole
  APPLICANT: Teresa Hong
  TITLE OF INVENTION: Retrocyclins - Antiviral and
  TITLE OF INVENTION: Antimicrobial Peptides
  FILE REFERENCE: UCLA-001CIP
  CURRENT APPLICATION NUMBER: US/10/141,645
  CURRENT FILING DATE: 2002-05-06
  PRIOR APPLICATION NUMBER: 60/284,855
  PRIOR FILING DATE: 2001-04-18
  PRIOR APPLICATION NUMBER: Unassigned
; PRIOR FILING DATE: 2002-04-18
; NUMBER OF SEQ ID NOS: 125
  SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 113
   LENGTH: 9
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: expansion of variant residues.
US-10-141-645-113
 Query Match
                         60.0%; Score 3; DB 12; Length 9;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
 Matches
          3; Conservative 0; Mismatches
                                                0; Indels
                                                                0; Gaps
                                                                            0:
           2 VLR 4
Qу
              +
           5 VLR 7
Db
RESULT 48
US-10-141-645-118
; Sequence 118, Application US/10141645
; Publication No. US20030144184A1
; GENERAL INFORMATION:
  APPLICANT: Robert Lehrer
; APPLICANT: Alan Waring
  APPLICANT: Alexander Cole
  APPLICANT: Teresa Hong
  TITLE OF INVENTION: Retrocyclins - Antiviral and
  TITLE OF INVENTION: Antimicrobial Peptides
  FILE REFERENCE: UCLA-001CIP
  CURRENT APPLICATION NUMBER: US/10/141,645.
  CURRENT FILING DATE: 2002-05-06
  PRIOR APPLICATION NUMBER: 60/284,855
: PRIOR FILING DATE: 2001-04-18
; PRIOR APPLICATION NUMBER: Unassigned
; PRIOR FILING DATE: 2002-04-18
; NUMBER OF SEQ ID NOS: 125
```

```
SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 118
    LENGTH: 9
    TYPE: PRT
    ORGANISM: Artificial Sequence
    FEATURE:
    OTHER INFORMATION: expansion of variant residues.
US-10-141-645-118
  Query Match
                         60.0%; Score 3; DB 12; Length 9;
  Best Local Similarity 100.0%; Pred. No. 6e+05;
  Matches
          3; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
                                                                           0;
Qу
            2 VLR 4
              5 VLR 7
Db
RESULT 49
US-10-141-645-119
; Sequence 119, Application US/10141645
; Publication No. US20030144184A1
; GENERAL INFORMATION:
; APPLICANT: Robert Lehrer
; APPLICANT: Alan Waring
  APPLICANT: Alexander Cole
  APPLICANT: Teresa Hong
  TITLE OF INVENTION: Retrocyclins - Antiviral and
  TITLE OF INVENTION: Antimicrobial Peptides
  FILE REFERENCE: UCLA-001CIP
  CURRENT APPLICATION NUMBER: US/10/141,645
  CURRENT FILING DATE: 2002-05-06
  PRIOR APPLICATION NUMBER: 60/284,855
  PRIOR FILING DATE: 2001-04-18
  PRIOR APPLICATION NUMBER: Unassigned
  PRIOR FILING DATE: 2002-04-18
; NUMBER OF SEQ ID NOS: 125
; SOFTWARE: FastSEQ for Windows Version 4.0
; SEQ ID NO 119
   LENGTH: 9
   TYPE: PRT
   ORGANISM: Artificial Sequence
   FEATURE:
   OTHER INFORMATION: expansion of variant residues.
US-10-141-645-119
 Query Match
                         60.0%; Score 3; DB 12; Length 9;
 Best Local Similarity
                         100.0%; Pred. No. 6e+05;
 Matches
           3; Conservative 0; Mismatches 0; Indels
                                                               0; Gaps
                                                                           0:
Qу
           2 VLR 4
             Db
           5 VLR 7
```

RESULT 50 US-09-968-744A-234

```
; Sequence 234, Application US/09968744A
; Publication No. US20030148372A1
; GENERAL INFORMATION:
; APPLICANT: Tomlinson, Ian M
; APPLICANT: Winter, Gregory
 TITLE OF INVENTION: Method to Screen Phage Display Libraries with Different
; FILE REFERENCE: 8039/1073
; CURRENT APPLICATION NUMBER: US/09/968,744A
; CURRENT FILING DATE: 2003-01-13
; PRIOR APPLICATION NUMBER: GB 9722131.1
; PRIOR FILING DATE: 1997-10-20
  PRIOR APPLICATION NUMBER: US 60/065,248
  PRIOR FILING DATE: 1997-11-13
  PRIOR APPLICATION NUMBER: US 60/066,729
  PRIOR FILING DATE: 1997-11-21
  PRIOR APPLICATION NUMBER: PCT/GB98/03135
; PRIOR FILING DATE: 1998-10-20
; PRIOR APPLICATION NUMBER: US 09/511,939
; PRIOR FILING DATE: 2000-02-24
; NUMBER OF SEQ ID NOS: 350
  SOFTWARE: PatentIn version 3.1
; SEQ ID NO 234
   LENGTH: 9
   TYPE: PRT
   ORGANISM: Homo sapiens
US-09-968-744A-234
  Query Match
                         60.0%; Score 3; DB 12; Length 9;
 Best Local Similarity 100.0%; Pred. No. 6e+05;
 Matches
          3; Conservative 0; Mismatches
                                               0; Indels
                                                               0; Gaps
                                                                           0;
           2 VLR 4
QУ
             111
Db
           4 VLR 6
Search completed: November 28, 2003, 15:43:19
```

Job time : 31 secs

GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.

OM protein - protein search, using sw model

Run on: November 28, 2003, 15:39:24; Search time 20 Seconds

(without alignments)

24.042 Million cell updates/sec

Title: US-09-228-866-46

Perfect score: 5

Sequence: 1 XVLRX 5

Scoring table: OLIGO

Gapop 60.0 , Gapext 60.0

Searched: 283308 seqs, 96168682 residues

Word size : 0

Total number of hits satisfying chosen parameters: 7093

Minimum DB seq length: 5
Maximum DB seq length: 33

Post-processing: Listing first 100 summaries

Database : PIR_76:*

1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1 2 3 4 5 6 7 8	3 3 3 3 3 3 3 3 3	60.0 60.0 60.0 60.0 60.0 60.0 60.0	14 15 17 17 19 19 20 20	2 2 2 2 2 2 2 2 2 2 2	S58426 I49420 PT0234 A60570 A48354 S43641 S18582 T50757	spermadhesin AWN h placental lactogen Ig heavy chain CRD Ig mu heavy chain nonstructural prot carboxylesterase (hypothetical prote pufK protein [impo
10 11 12 13	3 3 3 3	60.0 60.0 60.0 60.0	20 20 20 20 22	2 2 2 4 2	PQ0046 PH1326 A13050 I53672 S19802	citrate (si)-synth Ig heavy chain DJ pyruvate kinase (E somatotropin - syn ubiquitin - potato

14 15 16 17 18 19 20 21 22 23 24 52 67 28 29 30 31 33 33 34 40 41 42 43 44 45 50 51 55 55 67 55 66 66 66 66 66 66 66 66 66 66 66 66	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	60.0 60.0	2234444424222222222331122223355566666677777777777888889999	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	S03487 S43469 T42257 T42441 B43295 S53749 B39433 S32463 PC4437 PT0328 PQ0779 I57726 JC1081 A81139 B47310 S08088 A49288 S35924 C95030 S13205 S14727 F82113 S35583 PC4433 S14300 B87660 S55237 A60803 PT0278 A35890 C22565 A11490 A49792 B33932 I59142 PT0560 ECMUCR PQ0663 S42407 S70335 A28340 PT0246 E30608 PT0248 E30608 PT0248 E30608 PT0248 E30608 PT0246 E30608 PT0248 E30608 PT0248 E30608 PT0248 E30608 PT0246 E30608 PT0258 E30608 PT0298 E42057 E47594 D24180 B60246 PS0253
65	2	40.0	9	2	B60246
68 69 70	2 2 2	40.0 40.0 40.0	9 9 9	2 2 4	A60427 S78426 I57650

T-cell receptor be heterodisulfide re phosphoprotein pho protein phosphatas histone H4 - alfal histone H4 - rat ada 3'-region alkB hydrogenase chain hydrogenase (EC 1. Ig heavy chain CDR NADH2 dehydrogenas major outer membra brain natriuretic hypothetical prote MHVS28AA - murine gene VII protein alcohol dehydrogen T-cell receptor ga hypothetical prote glyceraldehyde-3-p glutathione transf hypothetical prote glutathione transf paired box transcr zona pellucida-bin hypothetical prote zinc-binding prote neuropeptide - sea Ig heavy chain CRD RNA-directed DNA p R-phycoerythrin be pyruvate kinase (E acylaminoacyl-pept Ig mu chain D regi platelet-derived q T-cell receptor be catch-relaxing pep membrane protein gramicidin S synth endosperm protein, myomodulin - Calif Ig heavy chain CRD Ig kappa chain V-I T-cell receptor be polyphosphate-gluc Ig heavy chain V r glycine reductase Ig heavy chain CRD fibroblast growth aspartate kinase (fibrinogen beta ch ornitho-kinin - ch glycine cleavage s phosphoenolpyruvat macrophage cytotox 52.5K protein - sp hemoglobin alpha c

71	2	40.0	0		T 77 7 7 7 1	
72	2		9	4	173804	hypothetical E2 pr
72 73		40.0	10	1	RHPGG	gonadoliberin - pi
_	2	40.0	10	1	RHSHG	gonadoliberin - sh
74	2	40.0	10	2	A46491	C3 homolog HX - in
75	2	40.0	10	2	A60410	beta-neoendorphin
76	2	40.0	10	2	I36893	apolipoprotein A-I
77	2	40.0	10	2	B33710	ornithine decarbox
78	2	40.0	10	2	A32543	cardioexcitatory n
79	2	40.0	10	2	S39030	lysyl-bradykinin -
80	2	40.0	10	2	S13224	virG protein - Agr
81	2	40.0	10	2	S06964	hypothetical prote
82	2	40.0	10	2	S70722	65.4K GTP-binding
83	2	40.0	10	2	S42282	parasporal crystal
84	2	40.0	10	2	A44646	neurotoxin-associa
85	2	40.0	10	2	I44644	neurotoxin-associa
86	2	40.0	10	2	S66248	processing enzyme,
87	2	40.0	10	2	PS0451	24K protein 4302 -
88	2	40.0	10	2	A43977	FMRFamide-like pro
89	2	40.0	10	2	A56633	neomyosuppressin -
90	2	40.0	10	2	B45482	platelet activatin
91	2	40.0	10	2	A61354	carnitine medium/l
92	2	40.0	10	2	PC4374	telomeric and tetr
93	2	40.0	10	2	A61218	alpha-gliadin 4Ha
94	2	40.0	10	2	T17075	cytochrome-c oxida
95	2	40.0	10	2	PQ0788	NADH2 dehydrogenas
96	2	40.0	10	2	PO0784	NADH2 dehydrogenas
97	2	40.0	11	2	A57458	gene Gax protein -
98	2	40.0	11	2	A55149	tetracenomycin A2
99	2	40.0	11	2	C59151	protein-tyrosine k
100	2	40.0	11	2	C61497	seed protein ws-18
				_		acca broceru wa-10

ALIGNMENTS

```
RESULT 1
S58426
spermadhesin AWN homolog - horse (fragment)
C; Species: Equus caballus (domestic horse)
C;Date: 12-Feb-1998 #sequence_revision 15-May-1998 #text_change 07-May-1999
C; Accession: S58426
R; Calvete, J.J.; Mann, K.; Schaefer, W.; Sanz, L.; Reinert, M.; Nessau, S.;
Raida, M.; Toepfer-Petersen, E.
Biochem. J. 310, 615-622, 1995
A; Title: Amino acid sequence of HSP-1, a major protein of stallion seminal
plasma: effect of glycosylation on its heparin- and gelatin-binding
capabilities.
A; Reference number: S58424; MUID: 95382782; PMID: 7654203
A; Accession: S58426
A; Molecule type: protein
A; Residues: 1-14 < CAL>
A; Experimental source: seminal plasma
 Query Match
                          60.0%; Score 3; DB 2; Length 14;
 Best Local Similarity 100.0%; Pred. No. 5.9e+02;
 Matches 3; Conservative 0; Mismatches 0; Indels
                                                                             0;
```

```
2 VLR 4
Qу
Db
           12 VLR 14
RESULT 2
I49420
placental lactogen I - western wild mouse (fragment)
C; Species: Mus spretus (western wild mouse)
C;Date: 02-Jul-1996 #sequence revision 02-Jul-1996 #text_change 11-Jan-2000
C; Accession: I49420
R; Ko, M.S.; Wang, X.; Horton, J.H.; Hagen, M.D.; Takahashi, N.; Maezaki, Y.;
Nadeau, J.H.
Mamm. Genome 5, 349-355, 1994
A; Title: Genetic mapping of 40 cDNA clones on the mouse genome by PCR.
A; Reference number: I48934; MUID: 94319082; PMID: 8043949
A; Accession: I49420
A; Status: preliminary; translated from GB/EMBL/DDBJ
A; Molecule type: DNA
A; Residues: 1-15 < RES>
A; Cross-references: EMBL: U05735; NID: g497071; PIDN: AAB60476.1; PID: g497072
C; Superfamily: prolactin
  Query Match
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  Best Local Similarity
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  Matches
            3; Conservative 0; Mismatches
                                                  0; Indels
                                                               0; Gaps
                                                                              0;
Qу
            2 VLR 4
Db
            4 VLR 6
RESULT 3
PT0234
Ig heavy chain CRD3 region (clone 1-130) - human (fragment)
C; Species: Homo sapiens (man)
C;Date: 30-Sep-1993 #sequence revision 30-Sep-1993 #text change 16-Aug-1996
C; Accession: PT0234
R; Yamada, M.; Wasserman, R.; Reichard, B.A.; Shane, S.; Caton, A.J.; Rovera, G.
J. Exp. Med. 173, 395-407, 1991
A; Title: Preferential utilization of specific immunoglobulin heavy chain
diversity and joining segments in adult human peripheral blood B lymphocytes.
A; Reference number: PT0222; MUID: 91108337; PMID: 1899102
A; Accession: PT0234
A; Molecule type: DNA
A; Residues: 1-17 < YAM>
A; Experimental source: B lymphocyte
C; Keywords: heterotetramer; immunoglobulin
  Query Match
                          60.0%; Score 3; DB 2; Length 17;
  Best Local Similarity
                          100.0%; Pred. No. 7e+02;
 Matches
            3; Conservative 0; Mismatches
                                                  0; Indels
                                                                 0; Gaps
                                                                              0;
Qу
            2 VLR 4
              Db
            6 VLR 8
```

```
RESULT 4
A60570
Ig mu heavy chain disease extra sequence - human (fragment)
C; Species: Homo sapiens (man)
C; Date: 28-Apr-1993 #sequence revision 28-Apr-1993 #text change 16-Aug-1996
C; Accession: A60570
R; Mihaesco, C.; Ferrara, P.; Guillemot, J.C.; Congy, N.; Gendron, M.C.; Roy,
J.P.; Sizaret, P.Y.; Mihaesco, E.
Mol. Immunol. 27, 771-776, 1990
A; Title: A new extra sequence at the amino terminal of a mu heavy chain disease
protein (DAG).
A; Reference number: A60570; MUID: 90384486; PMID: 2119480
A; Accession: A60570
A; Molecule type: protein
A; Residues: 1-17 <MIH>
C; Comment: This sequence is derived from the amino terminus of an abnormal
immunoglobulin found in lymphoproliferative malignancies.
C; Keywords: immunoglobulin
                          60.0%; Score 3; DB 2; Length 17;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 7e+02;
            3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                              0;
            2 VLR 4
QУ
              111
            7 VLR 9
RESULT 5
A48354
nonstructural protein 4a - murine hepatitis virus (strain A59)
C; Species: murine hepatitis virus, MHV
C;Date: 17-Feb-1994 #sequence revision 17-Feb-1994 #text change 08-Oct-1999
C; Accession: A48354
R; Weiss, S.R.; Zoltick, P.W.; Leibowitz, J.L.
Arch. Virol. 129, 301-309, 1993
A; Title: The ns4 gene of mouse hepatitis virus (MHV), strain A 59 contains two
ORFs and thus differs from ns4 of the JHM and S strains.
A; Reference number: A48354; MUID: 93228453; PMID: 8385918
A; Accession: A48354
A; Molecule type: genomic RNA
A; Residues: 1-19 <WEI>
A; Cross-references: GB: S58172; NID: g299093; PIDN: AAB26098.1; PID: g299094
A; Note: sequence extracted from NCBI backbone (NCBIN:129089, NCBIP:129090)
C; Keywords: nonstructural protein
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  Query Match
  Best Local Similarity
                          100.0%; Pred. No. 7.6e+02;
            3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                              0;
            2 VLR 4
Qу
              Db
           5 VLR 7
```

```
carboxylesterase (EC 3.1.1.1), thermostable - Alicyclobacillus acidocaldarius
(fragment)
C; Species: Alicyclobacillus acidocaldarius
C;Date: 19-Mar-1997 #sequence revision 01-Aug-1997 #text change 17-Mar-1999
C; Accession: S43641
R; Manco, G.; di Gennaro, S.; de Rosa, M.; Rossi, M.
Eur. J. Biochem. 221, 965-972, 1994
A; Title: Purification and characterization of a thermostable carboxylesterase
from the thermoacidophilic eubacterium Bacillus acidocaldarius.
A; Reference number: S43641; MUID: 94237161; PMID: 8181479
A; Accession: S43641
A; Molecule type: protein
A; Residues: 1-19 <MAN>
A; Experimental source: strain MT3
A; Note: the source is designated as Bacillus acidocaldarius
C; Keywords: carboxylic ester hydrolase; monomer
  Query Match
                          60.0%; Score 3; DB 2; Length 19;
  Best Local Similarity
                          100.0%; Pred. No. 7.6e+02;
  Matches
           3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
Qу
           2 VLR 4
              Db
           13 VLR 15
RESULT 7
S18582
hypothetical protein K (pufQ 3' region) - Rhodobacter sphaeroides
C; Species: Rhodobacter sphaeroides
C;Date: 31-Dec-1993 #sequence_revision 31-Dec-1993 #text_change 03-May-1994
C; Accession: S18582; S32855
R; Hunter, C.N.; McGlynn, P.; Ashby, M.K.; Burgess, J.G.; Olsen, J.D.
Mol. Microbiol. 5, 2649-2661, 1991
A; Title: DNA sequencing and complementation/deletion analysis of the bchA-puf
operon region of Rhodobacter sphaeroides: in vivo mapping of the oxygen-
regulated puf promoter.
A; Reference number: S18580; MUID: 92140030; PMID: 1779756
A; Accession: S18582
A; Status: preliminary
A; Molecule type: DNA
A; Residues: 1-20 < HUN>
A; Cross-references: EMBL: X68795
  Query Match
                          60.0%; Score 3; DB 2; Length 20;
  Best Local Similarity
                          100.0%; Pred. No. 8e+02;
           3; Conservative 0; Mismatches 0; Indels 0; Gaps
  Matches
                                                                             0;
           2 VLR 4
Qу
              Db
           15 VLR 17
RESULT 8
T50757
pufK protein [imported] - Rhodobacter sphaeroides
```

S43641

```
C; Species: Rhodobacter sphaeroides
C;Date: 21-Jul-2000 #sequence revision 21-Jul-2000 #text change 21-Jul-2000
C; Accession: T50757
R; Choudhary, M.; Kaplan, S.
Nucleic Acids Res. 28, 862-867, 2000
A; Title: DNA sequence analysis of the photosynthesis region of Rhodobacter
sphaeroides 2.4.1.
A; Reference number: Z25222; MUID: 20115911; PMID: 10648776
A; Accession: T50757
A; Status: preliminary; translated from GB/EMBL/DDBJ
A; Molecule type: DNA
A; Residues: 1-20 < CHO>
A; Cross-references: EMBL: AF195122; PIDN: AAF24301.1
A; Experimental source: strain 2.4.1
C; Genetics:
A;Gene: pufK
  Query Match
                          60.0%; Score 3; DB 2; Length 20;
  Best Local Similarity 100.0%; Pred. No. 8e+02;
            3; Conservative 0; Mismatches 0; Indels 0; Gaps
  Matches
                                                                             0:
           2 VLR 4
QУ
              Dh
           15 VLR 17
RESULT 9
PQ0046
citrate (si)-synthase (EC 4.1.3.7) - Streptomyces hygroscopicus (fragment)
N; Alternate names: citrate condensing enzyme; citrogenase; condensing enzyme;
oxaloacetate transacetase
C; Species: Streptomyces hygroscopicus
C;Date: 31-Dec-1990 #sequence revision 31-Dec-1990 #text_change 05-May-2000
C; Accession: P00046
R; Shimotohno, K.W.; Imai, S.; Murakami, T.; Seto, H.
Agric. Biol. Chem. 54, 463-470, 1990
A; Title: Purification and characterization of citrate synthase from Streptomyces
hygroscopicus SF-1293 and comparison of its properties with those of 2-
phosphinomethylmalic acid synthase.
A; Reference number: PS0106; MUID: 90334852; PMID: 1368511
A; Accession: PQ0046
A; Molecule type: protein
A; Residues: 1-20 <SHI>
A; Experimental source: strain SF-1293
C; Comment: This enzyme catalyzes the synthesis of citric acid.
C; Keywords: carbon-carbon lyase; coenzyme A; oxo-acid-lyase; tricarboxylic acid
cycle
 Query Match
                          60.0%; Score 3; DB 2; Length 20;
 Best Local Similarity 100.0%; Pred. No. 8e+02;
 Matches
          3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                             0;
           2 VLR 4
QУ
              Db
           6 VLR 8
```

```
RESULT 10
PH1326
Ig heavy chain DJ region (clone C515-116) - human (fragment)
C; Species: Homo sapiens (man)
C;Date: 30-Sep-1993 #sequence revision 30-Sep-1993 #text_change 07-May-1999
C; Accession: PH1326
R; Wasserman, R.; Galili, N.; Ito, Y.; Reichard, B.A.; Shane, S.; Rovera, G.
J. Exp. Med. 176, 1577-1581, 1992
A; Title: Predominance of fetal type DJH joining in young children with B
precursor lymphoblastic leukemia as evidence for an in utero transforming event.
A; Reference number: PH1302; MUID: 93094761; PMID: 1460419
A; Accession: PH1326
A; Molecule type: DNA
A; Residues: 1-20 < WAS>
C; Keywords: heterotetramer; immunoglobulin
  Query Match
                          60.0%; Score 3; DB 2; Length 20;
  Best Local Similarity 100.0%; Pred. No. 8e+02;
           3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
            2 VLR 4
Qу
              Db
            1 VLR 3
RESULT 11
A13050
pyruvate kinase (EC 2.7.1.40) - rat (fragment)
C; Species: Rattus norvegicus (Norway rat)
C;Date: 05-Jun-1987 #sequence_revision 05-Jun-1987 #text_change 03-Mar-1995
C; Accession: A13050
R; Edlund, B.; Andersson, J.; Titanji, V.; Dahlqvist, U.; Ekman, P.; Zetterqvist,
O.; Engstrom, L.
Biochem. Biophys. Res. Commun. 67, 1516-1521, 1975
A; Title: Amino acid sequence at the phosphorylated site of rat liver pyruvate
kinase.
A; Reference number: A13050; MUID: 76088052; PMID: 1106423
A; Accession: A13050
A; Molecule type: protein
A; Residues: 1-20 < EDL>
A; Experimental source: liver
C; Keywords: glycolysis; phosphotransferase
  Query Match
                          60.0%; Score 3; DB 2; Length 20;
  Best Local Similarity
                          100.0%; Pred. No. 8e+02;
 Matches
            3; Conservative 0; Mismatches
                                                 0; Indels
                                                                 0; Gaps
                                                                             0;
            2 VLR 4
QУ
              | | | |
Db
          11 VLR 13
RESULT 12
153672
somatotropin - synthetic
C; Species: synthetic
C;Date: 07-Jun-1996 #sequence revision 31-Jul-1997 #text_change 19-May-2000
```

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R; Bogosian, G.; Bilyeu, K.; O'Neil, J.P.
Gene 133, 17-22, 1993
A; Title: Genome rearrangements by residual IS10 elements in strains of
Escherichia coli K-12 which had undergone Tn10 mutagenesis and fusaric acid
selection.
A; Reference number: I53672; MUID: 94040791; PMID: 8224890
A; Accession: I53672
A; Status: translated from GB/EMBL/DDBJ
A; Molecule type: DNA
A; Residues: 1-20 < BOG>
A; Cross-references: GB:S67119; NID:g455674; PIDN:AAB28847.1; PID:g455675
A; Note: partial sequence of bovine somatotropin synthesized and expressed in
Escherichia coli fusion protein
  Query Match
                          60.0%; Score 3; DB 4; Length 20;
  Best Local Similarity 100.0%; Pred. No. 8e+02;
  Matches
           3; Conservative 0; Mismatches
                                                0; Indels
                                                                 0; Gaps
                                                                              0;
            2 VLR 4
Qу
              Db
           15 VLR 17
RESULT 13
S19802
ubiquitin - potato (fragment)
C; Species: Solanum tuberosum (potato)
C;Date: 30-Jun-1992 #sequence_revision 30-Jun-1992 #text_change 21-Jul-2000
C; Accession: T07823; S19802
R; Garbarino, J.E.; Rockhold, D.R.; Belknap, W.R.
Plant Mol. Biol. 20, 235-244, 1992
A; Title: Expression of stress-responsive ubiquitin genes in potato tubers.
A; Reference number: S25305; MUID: 93004476; PMID: 1327270
A; Accession: T07823
A; Status: preliminary; translated from GB/EMBL/DDBJ
A; Molecule type: mRNA
A; Residues: 1-22 <GAR>
A; Cross-references: EMBL: Z11668; NID: g21609; PIDN: CAA77734.2; PID: g4468034
A; Experimental source: cv. Lemhi Russet; tuber disc
C; Superfamily: ubiquitin; ubiquitin homology
  Query Match
                          60.0%; Score 3; DB 2; Length 22;
  Best Local Similarity 100.0%; Pred. No. 8.6e+02;
          3; Conservative 0; Mismatches 0; Indels
                                                              0; Gaps
                                                                             0;
Qу
            2 VLR 4
              + + + +
Db
           14 VLR 16
RESULT 14
S03487
T-cell receptor beta chain J region (clone HBP22) - human (fragment)
C; Species: Homo sapiens (man)
C;Date: 30-Jun-1992 #sequence_revision 30-Jun-1992 #text_change 30-May-1997
C; Accession: S03487
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C; Accession: I53672

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R; Kimura, N.; Toyonaga, B.; Yoshikai, Y.; Triebel, F.; Debre, P.; Minden, M.D.;
Mak, T.W.
J. Exp. Med. 164, 739-750, 1986
A; Title: Sequences and diversity of human T cell receptor beta chain variable
region genes.
A; Reference number: S03485; MUID: 86306525; PMID: 3755748
A; Accession: S03487
A; Status: translation not shown
A; Molecule type: mRNA
A; Residues: 1-22 < KIM>
A; Cross-references: EMBL: X04923
C; Keywords: T-cell receptor
  Query Match
                          60.0%; Score 3; DB 2; Length 22;
  Best Local Similarity 100.0%; Pred. No. 8.6e+02;
            3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
            2 VLR 4
Qy.
              Db
            6 VLR 8
RESULT 15
S43469
heterodisulfide reductase (EC 1.12.99.-) small chain - Methanosarcina barkeri
(fragment)
C; Species: Methanosarcina barkeri
C;Date: 19-Mar-1997 #sequence revision 01-Aug-1997 #text change 01-Feb-1999
C; Accession: S43469
R; Heiden, S.; Hedderich, R.; Setzke, E.; Thauer, R.K.
Eur. J. Biochem. 221, 855-861, 1994
A; Title: Purification of a two-subunit cytochrome-b-containing heterodisulfide
reductase from methanol-grown Methanosarcina barkeri.
A; Reference number: S43468; MUID: 94229084; PMID: 8174566
A; Accession: S43469
A; Molecule type: protein
A; Residues: 1-23 <HEI>
A; Experimental source: strain Fusaro
C; Genetics:
A;Gene: hdrE
C; Complex: heterodimer; large chain and small chain
C; Function:
A; Description: catalyzes the reduction of the heterodisulfide of coenzyme M and
7-mercaptoheptanoyl-L-threonine phosphate with molecular hydrogen, which is
coupled with electronic proton translocation
A; Pathway: energy-conserving electron-transport chain
A; Note: terminal step in pathway
C; Keywords: heterodimer; oxidoreductase; electron transfer; heme
  Query Match
                          60.0%; Score 3; DB 2; Length 23;
  Best Local Similarity 100.0%; Pred. No. 9e+02;
            3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                             0;
Qу
            2 VLR 4
Db
           13 VLR 15
```

```
RESULT 16
T42257
phosphoprotein phosphatase (EC 3.1.3.16) - Caenorhabditis elegans (fragment)
C; Species: Caenorhabditis elegans
C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text change 02-Jun-2000
C; Accession: T42257
R; Zeke, T.; Gergely, P.; Dombradi, V.
submitted to the EMBL Data Library, July 1996
A; Description: The catalytic subunits of Ser/Thr protein phosphatases from
Caenorhabditis elegans: a biochemical and molecular biological survey.
A; Reference number: Z22131
A; Accession: T42257
A; Status: preliminary; translated from GB/EMBL/DDBJ
A; Molecule type: DNA
A; Residues: 1-24 <ZEK>
A; Cross-references: EMBL: Z77735; PIDN: CAB01294.1
C; Superfamily: phosphoprotein phosphatase; phosphoesterase core homology;
phosphoprotein phosphatase homology
C; Keywords: phosphoric monoester hydrolase
  Query Match
                           60.0%; Score 3; DB 2; Length 24;
                           100.0%; Pred. No. 9.3e+02;
  Best Local Similarity
             3; Conservative 0; Mismatches
                                                 0; Indels
                                                                   0; Gaps
                                                                               0;
Qу
            2 VLR 4
              | | |
            5 VLR 7
Dh
RESULT 17
T42441
protein phosphatase - Caenorhabditis elegans (fragment)
C; Species: Caenorhabditis elegans
C;Date: 03-Dec-1999 #sequence revision 03-Dec-1999 #text change 02-Jun-2000
C; Accession: T42441
R; Zeke, T.; Gergely, P.; Dombradi, V.
submitted to the EMBL Data Library, July 1996
A; Description: The catalytic subunits of Ser/Thr protein phosphatases from
Caenorhabditis elegans: a biochemical and molecular biological survey.
A; Reference number: Z22131
A; Accession: T42441
A; Status: preliminary; translated from GB/EMBL/DDBJ
A; Molecule type: DNA
A; Residues: 1-24 <ZEK>
A; Cross-references: EMBL: Z77729; PIDN: CAB01288.1
C; Superfamily: phosphoprotein phosphatase; phosphoesterase core homology;
phosphoprotein phosphatase homology
  Query Match
                          60.0%; Score 3; DB 2; Length 24;
  Best Local Similarity
                          100.0%; Pred. No. 9.3e+02;
            3; Conservative 0; Mismatches
                                                  0; Indels
                                                                  0; Gaps
                                                                               0;
            2 VLR 4
QУ
              \parallel \parallel \parallel
Db
            5 VLR 7
```

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RESULT 18
B43295
histone H4 - alfalfa (fragment)
C; Species: Medicago sativa (alfalfa)
C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text change 12-Apr-1995
C; Accession: B43295
R; Waterborg, J.H.
Biochemistry 31, 6211-6219, 1992
A; Title: Identification of five sites of acetylation in alfalfa histone H4.
A; Reference number: A43295; MUID: 92329443; PMID: 1627562
A; Accession: B43295
A; Status: preliminary
A; Molecule type: protein
A; Residues: 1-24 <WAT>
C; Superfamily: histone H4
  Query Match
                          60.0%; Score 3; DB 2; Length 24;
  Best Local Similarity 100.0%; Pred. No. 9.3e+02;
  Matches
            3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                              0;
            2 VLR 4
Qу
              21 VLR 23
Db
RESULT 19
S53749
histone H4 - rat
C; Species: Rattus norvegicus (Norway rat)
C;Date: 23-Aug-1995 #sequence revision 19-Oct-1995 #text change 03-May-1996
C; Accession: S53749
R; Baneres, J.L.; Essalouh, L.; Jariel-Encontre, I.; Mesnier, D.; Garrod, S.;
Parello, J.
J. Mol. Biol. 243, 48-59, 1994
A; Title: Evidence indicating proximity in the nucleosome between the histone H4
N termini and the globular domain of histone H1.
A; Reference number: S53749; MUID: 95018250; PMID: 7932740
A; Accession: S53749
A; Status: preliminary
A; Molecule type: protein
A; Residues: 1-24 <BAN>
C; Superfamily: histone H4
  Query Match
                          60.0%; Score 3; DB 2; Length 24;
  Best Local Similarity 100.0%; Pred. No. 9.3e+02;
  Matches
           3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
           2 VLR 4
Qу
              | | | |
           14 VLR 16
Db
RESULT 20
ada 3'-region alkB homolog - Salmonella typhimurium (fragment)
C; Species: Salmonella typhimurium
```

```
C;Date: 21-Feb-1992 #sequence revision 21-Feb-1992 #text_change 30-Sep-1993
C; Accession: B39433
R; Hakura, A.; Morimoto, K.; Sofuni, T.; Nohmi, T.
J. Bacteriol. 173, 3663-3672, 1991
A; Title: Cloning and characterization of the Salmonella typhimurium ada gene,
which encodes O(6)-methylguanine-DNA methyltransferase.
A; Reference number: A39433; MUID: 91267928; PMID: 1904855
A; Accession: B39433
A; Status: preliminary
A; Molecule type: DNA
A; Residues: 1-24 < HAK>
A; Cross-references: GB: D90221
C; Superfamily: alkB protein
  Query Match
                          60.0%; Score 3; DB 2; Length 24;
  Best Local Similarity 100.0%; Pred. No. 9.3e+02;
  Matches
            3; Conservative
                               0; Mismatches
                                                 0; Indels
                                                                  0; Gaps
                                                                              0;
            2 VLR 4
Qу
              111
Db
           21 VLR 23
RESULT 21
S32463
hydrogenase chain vhuU - Methanococcus voltae
C; Species: Methanococcus voltae
C;Date: 19-Mar-1997 #sequence_revision 19-Mar-1997 #text_change 01-Aug-1997
C; Accession: S32463
R;Sorgenfrei, O.; Linder, D.; Karas, M.; Klein, A.
Eur. J. Biochem. 213, 1355-1358, 1993
A; Title: A novel very small subunit of a selenium containing [NiFe] hydrogenase
of Methanococcus voltae is postranslationally processed by cleavage at a defined
position.
A; Reference number: S32463; MUID: 93279338; PMID: 8504827
A; Accession: S32463
A; Status: preliminary
A; Molecule type: protein
A; Residues: 1-24 < SOR>
  Query Match
                          60.0%; Score 3; DB 2; Length 24;
  Best Local Similarity 100.0%; Pred. No. 9.3e+02;
           3; Conservative 0; Mismatches
                                                 0; Indels
                                                                 0; Gaps
                                                                              0;
Qу
           2 VLR 4
              +111
Db
           13 VLR 15
RESULT 22
PC4437
hydrogenase (EC 1.18.99.1) (NiFe) - Desulfovibrio vulgaris (fragment)
C; Species: Desulfovibrio vulgaris
C;Date: 04-Feb-1998 #sequence revision 13-Mar-1998 #text change 07-May-1999
C; Accession: PC4437
R;Romao, C.V.; Pereira, I.A.C.; Xavier, A.V.; LeGall, J.; Teixeira, M.
Biochem. Biophys. Res. Commun. 240, 75-79, 1997
```

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A; Title: Characterization of the [NiFe] hydrogenase from the sulfate reducer
Desulfovibrio vulgaris hildenborough.
A; Reference number: PC4437; MUID: 98042519; PMID: 9367885
A; Accession: PC4437
A; Molecule type: protein
A; Residues: 1-25 < ROM>
C; Keywords: oxidoreductase
  Query Match
                          60.0%; Score 3; DB 2; Length 25;
  Best Local Similarity
                          100.0%; Pred. No. 9.6e+02;
  Matches
            3; Conservative 0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0;
QУ
            2 VLR 4
              | | |
Db
           21 VLR 23
RESULT 23
PT0328
Ig heavy chain CDR3 region (clone J2-118) - human (fragment)
C; Species: Homo sapiens (man)
C;Date: 30-Sep-1993 #sequence revision 30-Sep-1993 #text change 02-Feb-2001
C; Accession: PT0328
R; Yamada, M.; Wasserman, R.; Reichard, B.A.; Shane, S.; Caton, A.J.; Rovera, G.
J. Exp. Med. 173, 395-407, 1991
A; Title: Preferential utilization of specific immunoglobulin heavy chain
diversity and joining segments in adult human peripheral blood B lymphocytes.
A; Reference number: PT0222; MUID: 91108337; PMID: 1899102
A; Accession: PT0328
A; Molecule type: DNA
A; Residues: 1-25 < YAM>
A; Experimental source: B lymphocyte
A; Note: the authors translated the stop codon for residue 14 as X
C; Keywords: heterotetramer; immunoglobulin
  Query Match
                          60.0%; Score 3; DB 2; Length 25;
  Best Local Similarity
                          100.0%; Pred. No. 9.6e+02;
  Matches
           3; Conservative 0; Mismatches
                                                 0; Indels
                                                                  0; Gaps
                                                                              0;
QУ
            2 VLR 4
              Db
           16 VLR 18
RESULT 24
PO0779
NADH2 dehydrogenase (EC 1.6.99.3) 42K chain - fava bean mitochondrion (fragment)
N; Alternate names: complex I 42K chain; NADH-ubiquinone reductase 42K chain
C; Species: mitochondrion Vicia faba (fava bean)
C;Date: 03-May-1994 #sequence revision 07-Oct-1994 #text change 03-Jun-2002
C; Accession: PQ0779
R; Leterme, S.; Boutry, M.
Plant Physiol. 102, 435-443, 1993
A; Title: Purification and preliminary characterization of mitochondrial complex
I (NADH:ubiquinone reductase) from broad bean (Vicia faba L.).
A; Reference number: PQ0775; MUID: 94151437; PMID: 8108509
A; Accession: PQ0779
```

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A; Molecule type: protein
A; Residues: 1-26 < LET >
C; Comment: Complex I, mitochondrial NADH-ubiquiquinone reductase, is the first
of the three proton-translocating complexes of the mitochondrial respiratory
chain and composed of 35 different subunits ranging from 5K to 75K.
C; Comment: This enzyme catalyzes electron transfer from endogenous NADH to
ubiquinone by a large number of redox groups.
C; Genetics:
A; Genome: mitochondrion
C; Superfamily: NADH dehydrogenase (ubiquinone) 49K protein
C; Keywords: electron transfer; mitochondrion; oxidoreductase
  Query Match
                          60.0%; Score 3; DB 2; Length 26;
  Best Local Similarity 100.0%; Pred. No. 1e+03;
  Matches
           3; Conservative 0; Mismatches
                                                 0; Indels
                                                                  0; Gaps
                                                                              0;
            2 VLR 4
Qу
              Db
           24 VLR 26
RESULT 25
I57726
major outer membrane protein A(3b) - Escherichia coli
C; Species: Escherichia coli
C;Date: 07-Jun-1996 #sequence revision 07-Jun-1996 #text_change 08-Oct-1999
C; Accession: I57726
R; Gordon, G.; Gayda, R.C.; Markovitz, A.
Mol. Gen. Genet. 193, 414-421, 1984
A; Title: Sequence of the regulatory region of omp T, the gene specifying major
outer membrane protein a (3b) of Escherichia coli K-12: implications for
regulation and processing.
A; Reference number: I57726; MUID: 84167352; PMID: 6323918
A; Accession: I57726
A; Status: preliminary; translated from GB/EMBL/DDBJ
A; Molecule type: DNA
A; Residues: 1-26 < RES>
A; Cross-references: EMBL: X00348; NID: g42163; PIDN: CAA25097.1; PID: g42164
  Query Match
                          60.0%; Score 3; DB 2; Length 26;
  Best Local Similarity 100.0%; Pred. No. 1e+03;
  Matches
            3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                             0;
Qу
            2 VLR 4
              Db
           15 VLR 17
RESULT 26
JC1081
brain natriuretic peptide - pig
C; Species: Sus scrofa domestica (domestic pig)
C;Date: 27-Aug-1995 #sequence_revision 19-Oct-1995 #text_change 16-Feb-1997
C; Accession: JC1081
R; Chen, H.; Zhang, J.; Wang, Q.S.; Cui, H.; Tang, J.
J. Fudan Univ. (Natur. Sci.) 30, 413-416, 1991
A; Title: Chemical synthesis and cloning of the porcine brain natriuretic gene.
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A; Reference number: JC1081
A; Accession: JC1081
A; Molecule type: DNA
A; Residues: 1-27 < CHE>
A; Note: The translation of the start codon ATG is not given in this paper
C; Genetics:
A; Gene: bnp
C; Superfamily: natriuretic peptide A precursor
C; Keywords: brain; natriuretic
  Query Match
                          60.0%; Score 3; DB 2; Length 27;
  Best Local Similarity
                          100.0%; Pred. No. 1e+03;
  Matches
            3; Conservative 0; Mismatches
                                                 0; Indels
                                                                  0; Gaps
                                                                              0;
Qу
            2 VLR 4
              Db
           23 VLR 25
RESULT 27
A81139
hypothetical protein NMB0953 [imported] - Neisseria meningitidis (strain MC58
serogroup B)
C; Species: Neisseria meningitidis
C;Date: 31-Mar-2000 #sequence_revision 31-Mar-2000 #text_change 19-Jan-2001
C; Accession: A81139
R; Tettelin, H.; Saunders, N.J.; Heidelberg, J.; Jeffries, A.C.; Nelson, K.E.;
Eisen, J.A.; Ketchum, K.A.; Hood, D.W.; Peden, J.F.; Dodson, R.J.; Nelson, W.C.;
Gwinn, M.L.; DeBoy, R.; Peterson, J.D.; Hickey, E.K.; Haft, D.H.; Salzberg,
S.L.; White, O.; Fleischmann, R.D.; Dougherty, B.A.; Mason, T.; Ciecko, A.;
Parksey, D.S.; Blair, E.; Cittone, H.; Clark, E.B.; Cotton, M.D.; Utterback,
T.R.; Khouri, H.; Qin, H.; Vamathevan, J.; Gill, J.; Scarlato, V.; Masignani,
V.; Pizza, M.
Science 287, 1809-1815, 2000
A; Authors: Grandi, G.; Sun, L.; Smith, H.O.; Fraser, C.M.; Moxon, E.R.;
Rappuoli, R.; Venter, J.C.
A; Title: Complete genome sequence of Neisseria meningitidis serogroup B strain
A; Reference number: A81000; MUID: 20175755; PMID: 10710307
A; Accession: A81139
A; Status: preliminary
A; Molecule type: DNA
A; Residues: 1-27 <TET>
A; Cross-references: GB: AE002446; GB: AE002098; NID: g7226185; PIDN: AAF41359.1;
PID:g7226192; GSPDB:GN00119; TIGR:NMB0953
A; Experimental source: serogroup B, strain MC58
C; Genetics:
A; Gene: NMB0953
  Query Match
                          60.0%; Score 3; DB 2; Length 27;
  Best Local Similarity 100.0%; Pred. No. 1e+03;
           3; Conservative 0; Mismatches
                                                  0; Indels
                                                                 0; Gaps
                                                                              0;
Ov
            2 VLR 4
              111
Db
           23 VLR 25
```

```
RESULT 28
B47310
MHVS28AA - murine hepatitis virus
C; Species: murine hepatitis virus, MHV
C;Date: 16-Feb-1994 #sequence_revision 18-Nov-1994 #text_change 08-Oct-1999
C; Accession: B47310
R; Schaad, M.C.; Baric, R.S.
Virology 196, 190-198, 1993
A; Title: Evidence for new transcriptional units encoded at the 3' end of the
mouse hepatitis virus genome.
A; Reference number: A47310; MUID: 93362405; PMID: 8395114
A; Contents: A59
A; Accession: B47310
A; Status: preliminary
A; Molecule type: nucleic acid
A; Residues: 1-28 < SCH>
A;Cross-references: GB:S64884; NID:g408334; PIDN:AAB27903.1; PID:g408336
A; Note: sequence extracted from NCBI backbone (NCBIN:136580, NCBIP:136582)
  Query Match
                          60.0%; Score 3; DB 2; Length 28;
  Best Local Similarity 100.0%; Pred. No. 1.1e+03;
           3; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
                                                                              0;
Qу
            2 VLR 4
              III
Db
           24 VLR 26
RESULT 29
S08088
gene VII protein - phage I2-2
C; Species: phage I2-2
C;Date: 07-Sep-1990 #sequence revision 07-Sep-1990 #text_change 20-Sep-1999
C; Accession: S08088
R;Schoenmakers, H.F.P.M.; Yu, M.; Konings, R.N.H.
submitted to the EMBL Data Library, February 1989
A; Reference number: S08084
A; Accession: S08088
A; Molecule type: DNA
A; Residues: 1-29 <SCH>
A; Cross-references: EMBL: X14336; NID: g14920; PIDN: CAA32515.1; PID: g14926
C; Genetics:
A:Gene: VII
C; Superfamily: class I filamentous phage coat protein C chain I
  Query Match
                          60.0%; Score 3; DB 2; Length 29;
  Best Local Similarity
                          100.0%; Pred. No. 1.1e+03;
           3; Conservative 0; Mismatches 0; Indels
  Matches
                                                                 0; Gaps
                                                                             0;
QУ
           2 VLR 4
              111
Db
           27 VLR 29
```

RESULT 30 A49288

```
alcohol dehydrogenase (acceptor) (EC 1.1.99.8) - Acetobacter methanolicus
(fragment)
N; Alternate names: type II methanol dehydrogenase
C; Species: Acetobacter methanolicus
C;Date: 24-Feb-1994 #sequence_revision 18-Nov-1994 #text change 16-Oct-1998
C; Accession: A49288
R; Matsushita, K.; Takahashi, K., Adachi, O.
Biochemistry 32, 5576-5582, 1993
A; Title: A novel quinoprotein methanol dehydrogenase containing an additional
32-kilodalton peptide purified from Acetobacter methanolicus: identification of
the peptide as a MoxJ product.
A; Reference number: A49288; MUID: 93277836; PMID: 8389187
A; Accession: A49288
A; Status: preliminary
A; Molecule type: protein
A; Residues: 1-29 < MAT>
A; Note: sequence extracted from NCBI backbone (NCBIP:133048)
C; Keywords: alcohol metabolism; oxidoreductase
  Query Match
                          60.0%; Score 3; DB 2; Length 29;
  Best Local Similarity
                          100.0%; Pred. No. 1.1e+03;
            3; Conservative 0; Mismatches 0; Indels 0; Gaps
  Matches
                                                                             0;
            2 VLR 4
Qу
              Db
            6 VLR 8
RESULT 31
S35924
T-cell receptor gamma chain - human (fragment)
C; Species: Homo sapiens (man)
C;Date: 06-Feb-1995 #sequence_revision 06-Feb-1995 #text_change 30-Jun-2001
C; Accession: S35924
R; Mathioudakis, G.; Platsoucas, C.D.
submitted to the EMBL Data Library, May 1993
A; Description: An alternative splicing between V-gamma, J-gamma2.3 and C-gamma2
gene segments of the gamma-chain T-cell receptor transcripts from peripheral
blood lymphocytes from normal donors.
A; Reference number: S32764
A; Accession: S35924
A; Status: preliminary
A; Molecule type: mRNA
A; Residues: 1-29 < MAT>
A; Cross-references: EMBL: Z22684
C; Keywords: T-cell receptor
  Query Match
                          60.0%; Score 3; DB 2; Length 29;
  Best Local Similarity
                          100.0%; Pred. No. 1.1e+03;
          3; Conservative 0; Mismatches 0; Indels 0; Gaps
           2 VLR 4
Qу
              Db
           1 VLR 3
```

```
C95030
hypothetical protein SP0258 [imported] - Streptococcus pneumoniae (strain TIGR4)
C; Species: Streptococcus pneumoniae
C;Date: 03-Aug-2001 #sequence revision 03-Aug-2001 #text_change 03-Aug-2001
C; Accession: C95030
R; Tettelin, H.; Nelson, K.E.; Paulsen, I.T.; Eisen, J.A.; Read, T.D.; Peterson,
S.; Heidelberg, J.; DeBoy, R.T.; Haft, D.H.; Dodson, R.J.; Durkin, A.S.; Gwinn,
M.; Kolonay, J.F.; Nelson, W.C.; Peterson, J.D.; Umayam, L.A.; White, O.;
Salzberg, S.L.; Lewis, M.R.; Radune, D.; Holtzapple, E.; Khouri, H.; Wolf, A.M.;
Utterback, T.R.; Hansen, C.L.; McDonald, L.A.; Feldblyum, T.V.; Angiuoli, S.;
Dickinson, T.; Hickey, E.K.; Holt, I.E.
Science 293, 498-506, 2001
A; Authors: Loftus, B.J.; Yang, F.; Smith, H.O.; Venter, J.C.; Dougherty, B.A.;
Morrison, D.A.; Hollingshead, S.K.; Fraser, C.M.
A; Title: Complete Genome Sequence of a virulent isolate of Streptococcus
pneumoniae.
A; Reference number: A95000; MUID: 21357209; PMID: 11463916
A; Accession: C95030
A; Status: preliminary
A; Molecule type: DNA
A; Residues: 1-30 < KUR>
A; Cross-references: GB: AE005672; PIDN: AAK74436.1; PID: g14971728; GSPDB: GN00164;
TIGR:SP4SP0258
A; Experimental source: strain TIGR4
C; Genetics:
A; Gene: SP0258
  Query Match
                          60.0%; Score 3; DB 2; Length 30;
  Best Local Similarity 100.0%; Pred. No. 1.1e+03;
  Matches
           3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                              0:
            2 VLR 4
Qу
              Db
           18 VLR 20
RESULT 33
S13205
glyceraldehyde-3-phosphate dehydrogenase (phosphorylating) (EC 1.2.1.12) I -
fungus (Trichoderma koningii) (fragment)
C; Species: Trichoderma koningii
C;Date: 21-Nov-1993 #sequence revision 21-Jul-1995 #text change 03-Jun-2002
C; Accession: S13205
R; Sakai, K.; Hasumi, K.; Endo, A.
Eur. J. Biochem. 193, 195-202, 1990
A; Title: Two glyceraldehyde-3-phosphate dehydrogenase isozymes from the koningic
acid (heptelidic acid) producer Trichoderma koningii.
A; Reference number: S13205; MUID: 91031446; PMID: 2226438
A; Accession: S13205
A; Status: preliminary
A; Molecule type: protein
A; Residues: 1-31 <EUR>
A; Experimental source: strain M3947
C; Superfamily: glyceraldehyde-3-phosphate dehydrogenase
C; Keywords: gluconeogenesis; glycolysis; homotetramer; NAD; oxidoreductase
 Query Match
                          60.0%; Score 3; DB 2; Length 31;
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Best Local Similarity 100.0%; Pred. No. 1.2e+03;
  Matches
            3; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
                                                                               0:
Qу
            2 VLR 4
               \parallel \parallel \parallel
Db
           16 VLR 18
RESULT 34
S14727
glutathione transferase (EC 2.5.1.18) 7.3 - Serratia marcescens (fragment)
C; Species: Serratia marcescens
C;Date: 19-Mar-1997 #sequence_revision 30-Jan-1998 #text change 01-Feb-1999
C; Accession: S14727
R; di Ilio, C.; Aceto, A.; Piccolomini, R.; Allocati, N.; Faraone, A.;
Bucciarelli, T.; Barra, D.; Federici, G.
Biochim. Biophys. Acta 1077, 141-146, 1991
A; Title: Purification and characterization of a novel glutathione transferase
from Serratia marcescens.
A; Reference number: S14727; MUID: 91198121; PMID: 2015287
A; Accession: S14727
A; Molecule type: protein
A; Residues: 1-31 <ILI>
A; Experimental source: strain CIP 6755
C; Complex: homodimer
C; Function:
A;Description: catalyzes conjugation of glutathione to a large variety of
electrophilic compounds of endobiotic and xenobiotic origin; also involved in
intracellular binding and transport of hydrophobic compounds; involved in
detoxification of organic hydroperoxides
C; Superfamily: glutathione transferase
C; Keywords: homodimer; transferase
  Query Match
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  Best Local Similarity 100.0%; Pred. No. 1.2e+03;
            3; Conservative 0; Mismatches 0; Indels
  Matches
                                                                  0; Gaps
                                                                              0;
            2 VLR 4
Qу
              111
           17 VLR 19
Db
RESULT 35
F82113
hypothetical protein VC2155 [imported] - Vibrio cholerae (strain N16961
serogroup O1)
C; Species: Vibrio cholerae
C;Date: 18-Aug-2000 #sequence_revision 20-Aug-2000 #text change 02-Feb-2001
C; Accession: F82113
R; Heidelberg, J.F.; Eisen, J.A.; Nelson, W.C.; Clayton, R.A.; Gwinn, M.L.;
Dodson, R.J.; Haft, D.H.; Hickey, E.K.; Peterson, J.D.; Umayam, L.A.; Gill,
S.R.; Nelson, K.E.; Read, T.D.; Tettelin, H.; Richardson, D.; Ermolaeva, M.D.;
Vamathevan, J.; Bass, S.; Qin, H.; Dragoi, I.; Sellers, P.; McDonald, L.;
Utterback, T.; Fleishmann, R.D.; Nierman, W.C.; White, O.; Salzberg, S.L.;
Smith, H.O.; Colwell, R.R.; Mekalanos, J.J.; Venter, J.C.; Fraser, C.M.
Nature 406, 477-483, 2000
```

```
A; Title: DNA Sequence of both chromosomes of the cholera pathogen Vibrio
cholerae.
A; Reference number: A82035; MUID: 20406833; PMID: 10952301
A; Accession: F82113
A; Status: preliminary
A; Molecule type: DNA
A; Residues: 1-31 <HEI>
A; Cross-references: GB: AE004287; GB: AE003852; NID: g9656689; PIDN: AAF95300.1;
GSPDB:GN00126; TIGR:VC2155
A; Experimental source: serogroup O1; strain N16961; biotype El Tor
C; Genetics:
A;Gene: VC2155
A; Map position: 1
  Query Match
                          60.0%; Score 3; DB 2; Length 31;
  Best Local Similarity 100.0%; Pred. No. 1.2e+03;
           3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                              0;
           2 VLR 4
Ov
              22 VLR 24
Db
RESULT 36
S35583
glutathione transferase (EC 2.5.1.18) - Xanthomonas campestris (fragment)
C; Species: Xanthomonas campestris
C;Date: 19-Mar-1997 #sequence revision 30-Jan-1998 #text change 17-Mar-1999
C; Accession: S35583
R; di Ilio, C.; Aceto, A.; Allocati, N.; Piccolomini, R.; Bucciarelli, T.;
Dragani, B.; Faraone, A.; Sacchetta, P.; Petruzzelli, R.; Federici, G.
Arch. Biochem. Biophys. 305, 110-114, 1993
A; Title: Characterization of glutathione transferase from Xanthomonas
campestris.
A; Reference number: S35583; MUID: 93343617; PMID: 8342943
A; Accession: S35583
A; Molecule type: protein
A; Residues: 1-32 <ILI>
C; Complex: dimer
C; Function:
A; Description: catalyzes conjugation of glutathione to a large variety of
electrophilic compounds of endobiotic and xenobiotic origin; also involved in
intracellular binding and transport of hydrophobic compounds; involved in
detoxification of organic hydroperoxides
C; Superfamily: glutathione transferase
C; Keywords: dimer; transferase
  Query Match
                          60.0%; Score 3; DB 2; Length 32;
  Best Local Similarity
                          100.0%; Pred. No. 1.2e+03;
  Matches
            3; Conservative 0; Mismatches
                                                  0; Indels
                                                                 0; Gaps
                                                                             0;
Qу
            2 VLR 4
              Db
           17 VLR 19
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```
PC4433
paired box transcription factor Pax-6 splice form 3 - bovine (fragment)
C; Species: Bos primigenius taurus (cattle)
C;Date: 04-Feb-1998 #sequence_revision 13-Mar-1998 #text_change 15-Oct-1999
C; Accession: PC4433
R; Jaworski, C.; Sperbeck, S.; Graham, C.; Wistow, G.
Biochem. Biophys. Res. Commun. 240, 196-202, 1997
A; Title: Alternative splicing of Pax6 in bovine eye and evolutionary
conservation of intron sequences.
A; Reference number: PC4431; MUID: 98042543; PMID: 9367909
A; Accession: PC4433
A; Molecule type: mRNA
A; Residues: 1-32 < JAW>
A; Cross-references: GB:U73855
C; Comment: This protein is involved in eye development and in tissue specific
gene expression within the eye.
C; Superfamily: paired box transcription factor Pax-6; homeobox homology; paired
box homology
C; Keywords: DNA binding; homeobox; nucleus; transcription regulation
  Query Match
                          60.0%; Score 3; DB 2; Length 32;
  Best Local Similarity 100.0%; Pred. No. 1.2e+03;
  Matches
            3; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                              0;
Qу
           2 VLR 4
              111
Db
           30 VLR 32
RESULT 38
S14300
zona pellucida-binding glycoprotein - pig
C; Species: Sus scrofa domestica (domestic pig)
C;Date: 19-Mar-1997 #sequence revision 19-Mar-1997 #text change 13-Sep-1998
C; Accession: S14300
R; Jonakova, V.; Sanz, L.; Calvete, J.J.; Henschen, A.; Cechova, D.; Toepfer-
Petersen, E.
FEBS Lett. 280, 183-186, 1991
A; Title: Isolation and biochemical characterization of a zona pellucida-binding
glycoprotein of boar spermatozoa.
A; Reference number: S14300; MUID: 91184410; PMID: 1849093
A; Accession: S14300
A; Status: preliminary
A; Molecule type: protein
A; Residues: 1-32 < JON>
C; Superfamily: spermadhesin
  Query Match
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 Best Local Similarity
                         100.0%; Pred. No. 1.2e+03;
 Matches
            3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                             0;
            2 VLR 4
Qу
              HH
           12 VLR 14
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B87660
hypothetical protein CC3316 [imported] - Caulobacter crescentus
C; Species: Caulobacter crescentus
C;Date: 20-Apr-2001 #sequence revision 20-Apr-2001 #text change 20-Apr-2001
C; Accession: B87660
R; Nierman, W.C.; Feldblyum, T.V.; Paulsen, I.T.; Nelson, K.E.; Eisen, J.;
Heidelberg, J.F.; Alley, M.; Ohta, N.; Maddock, J.R.; Potocka, I.; Nelson, W.C.;
Newton, A.; Stephens, C.; Phadke, N.D.; Ely, B.; Laub, M.T.; DeBoy, R.T.;
Dodson, R.J.; Durkin, A.S.; Gwinn, M.L.; Haft, D.H.; Kolonay, J.F.; Smit, J.;
Craven, M.; Khouri, H.; Shetty, J.; Berry, K.; Utterback, T.; Tran, K.; Wolf,
A.; Vamathevan, J.; Ermolaeva, M.; White, O.; Salzberg, S.L.; Shapiro, L.;
Venter, J.C.; Fraser, C.M.
Proc. Natl. Acad. Sci. U.S.A. 98, 4136-4141, 2001
A; Title: Complete Genome Sequence of Caulobacter crescentus.
A; Reference number: A87249; MUID: 21173698; PMID: 11259647
A; Accession: B87660
A; Status: preliminary
A; Molecule type: DNA
A; Residues: 1-33 <STO>
A; Cross-references: GB: AE005673; NID: g13425012; PIDN: AAK25278.1; GSPDB: GN00148
C; Genetics:
A;Gene: CC3316
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  Best Local Similarity 100.0%; Pred. No. 1.2e+03;
            3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                             0;
            2 VLR 4
Qу
           29 VLR 31
Dh
RESULT 40
S55237
zinc-binding protein ZBP14 - maize (fragment)
C; Species: Zea mays (maize)
C;Date: 27-Oct-1995 #sequence revision 03-Nov-1995 #text change 07-May-1999
C; Accession: S55237
R; Robinson, K.; Jones, D.; Howell, S.; Soneji, Y.; Martin, S.; Aitken, A.
Biochem. J. 307, 267-272, 1995
A; Title: Expression and characterization of maize ZBP14, a member of a new
family of zinc-binding proteins.
A; Reference number: S55237; MUID: 95234046; PMID: 7717986
A; Accession: S55237
A; Molecule type: protein
A; Residues: 1-5 < ROB>
  Query Match
                          40.0%; Score 2; DB 2; Length 5;
  Best Local Similarity 100.0%; Pred. No. 2.8e+05;
           2; Conservative 0; Mismatches 0; Indels 0; Gaps
 Matches
                                                                             0;
            2 VL 3
Qу
            4 VL 5
Db
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```
neuropeptide - sea anemone (Anthopleura elegantissima)
C; Species: Anthopleura elegantissima
C;Date: 30-Sep-1993 #sequence revision 30-Sep-1993 #text_change 07-May-1999
C; Accession: A60803
R; Graff, D.; Grimmelikhuijzen, C.J.P.
Brain Res. 442, 354-358, 1988
A; Title: Isolation of <Glu-Ser-Lu-Arg-Trp-NH-2, a novel neuropeptide from sea
anemones.
A; Reference number: A60803; MUID: 88222764; PMID: 2897223
A; Accession: A60803
A; Molecule type: protein
A; Residues: 1-5 < GRA>
C; Keywords: amidated carboxyl end; neuropeptide; pyroglutamic acid
F;1/Modified site: pyrrolidone carboxylic acid (Gln) #status experimental
F;5/Modified site: amidated carboxyl end (Trp) #status experimental
  Query Match
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  Best Local Similarity
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  Matches
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                                                                              0;
Qу
            3 LR 4
              Db
            3 LR 4
RESULT 42
PT0278
Ig heavy chain CRD3 region (clone 4-88) - human (fragment)
C; Species: Homo sapiens (man)
C;Date: 30-Sep-1993 #sequence revision 30-Sep-1993 #text change 16-Aug-1996
C; Accession: PT0278
R; Yamada, M.; Wasserman, R.; Reichard, B.A.; Shane, S.; Caton, A.J.; Rovera, G.
J. Exp. Med. 173, 395-407, 1991
A; Title: Preferential utilization of specific immunoglobulin heavy chain
diversity and joining segments in adult human peripheral blood B lymphocytes.
A; Reference number: PT0222; MUID: 91108337; PMID: 1899102
A; Accession: PT0278
A; Molecule type: DNA
A; Residues: 1-5 < YAM>
A; Experimental source: B lymphocyte
C; Keywords: heterotetramer; immunoglobulin
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  Best Local Similarity
                          100.0%; Pred. No. 2.8e+05;
  Matches
            2; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
            2 VL 3
QУ
              Db
            4 VL 5
RESULT 43
A35890
RNA-directed DNA polymerase (EC 2.7.7.49) 66K chain - human immunodeficiency
virus type 1 (fragment)
C; Species: human immunodeficiency virus type 1, HIV-1
```

A60803

```
C;Date: 09-Nov-1990 #sequence_revision 09-Nov-1990 #text_change 31-Dec-1993
C; Accession: A35890
R; Bathurst, I.C.; Moen, L.K.; Lujan, M.A.; Gibson, H.L.; Feucht, P.H.;
Pichuantes, S.; Craik, C.S.; Santi, D.V.; Barr, P.J.
Biochem. Biophys. Res. Commun. 171, 589-595, 1990
A; Title: Characterization of the human immunodeficiency virus type-1 reverse
transcriptase enzyme produced in yeast.
A; Reference number: A35890; MUID: 90386627; PMID: 1698361
A; Accession: A35890
A; Status: preliminary
A; Molecule type: protein
A; Residues: 1-6 <BAT>
C; Keywords: nucleotidyltransferase
  Query Match
                          40.0%; Score 2; DB 2; Length 6;
  Best Local Similarity 100.0%; Pred. No. 2.8e+05;
           2; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                              0;
            2 VL 3
QУ
            5 VL 6
Db
RESULT 44
C22565
R-phycoerythrin beta-1 chain - red alga (Gastroclonium coulteri) (fragment)
C; Species: Gastroclonium coulteri
C;Date: 07-Mar-1988 #sequence_revision 07-Mar-1988 #text change 23-Mar-1993
C; Accession: C22565
R; Klotz, A.V.; Glazer, A.N.
J. Biol. Chem. 260, 4856-4863, 1985
A; Title: Characterization of the bilin attachment sites in R-phycoerythrin.
A; Reference number: A22565; MUID: 85182601; PMID: 3886644
A; Accession: C22565
A; Molecule type: protein
A; Residues: 1-6 < KLO>
  Query Match
                          40.0%; Score 2; DB 2; Length 6;
  Best Local Similarity 100.0%; Pred. No. 2.8e+05;
  Matches
           2; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
QУ
            3 LR 4
              Db
            5 LR 6
RESULT 45
A11490
pyruvate kinase (EC 2.7.1.40) - pig (fragment)
C; Species: Sus scrofa domestica (domestic pig)
C;Date: 05-Jun-1987 #sequence revision 05-Jun-1987 #text change 03-Mar-1995
C; Accession: A11490
R; Hjelmquist, G.; Andersson, J.; Edlund, B.; Engstrom, L.
Biochem. Biophys. Res. Commun. 61, 559-563, 1974
A; Title: Amino acid sequence of a (32-P) phosphopeptide from pig liver pyruvate
kinase phosphorylated by cyclic 3',5'-AMP-stimulated protein kinase and gamma-
(32-P)ATP.
```

```
A; Reference number: A11490; MUID: 75127438; PMID: 4375989
A; Accession: A11490
A; Molecule type: protein
A; Residues: 1-6 <HJE>
A; Experimental source: liver
C; Keywords: glycolysis; phosphotransferase
  Query Match
                          40.0%; Score 2; DB 2; Length 6;
  Best Local Similarity
                          100.0%; Pred. No. 2.8e+05;
  Matches
           2; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
                                                                              0;
            3 LR 4
QУ
              Db
            1 LR 2
RESULT 46
A49792
acylaminoacyl-peptidase (EC 3.4.19.1) - rabbit (fragment)
C; Species: Oryctolagus cuniculus (domestic rabbit)
C;Date: 03-May-1994 #sequence revision 03-May-1994 #text change 07-May-1999
C; Accession: A49792
R; Krishna, R.G.; Chin, C.C.Q.; Wold, F.
Anal. Biochem. 199, 45-50, 1991
A; Title: N-terminal sequence analysis of N(alpha)-acetylated proteins after
unblocking with N-acylaminoacyl-peptide hydrolase.
A; Reference number: A49792; MUID: 92222120; PMID: 1807161
A; Accession: A49792
A; Status: preliminary
A; Molecule type: protein
A; Residues: 1-6 < KRI >
C; Keywords: acetylated amino end; hydrolase; omega peptidase
F;1/Modified site: acetylated amino end (Met) #status experimental
                          40.0%; Score 2; DB 2; Length 6;
  Query Match
  Best Local Similarity
                          100.0%; Pred. No. 2.8e+05;
  Matches
            2; Conservative 0; Mismatches
                                                  0; Indels 0; Gaps
                                                                              0;
Qу
            2 VL 3
Db
            5 VL 6
RESULT 47
B33932
Ig mu chain D region (D23) - mouse
C; Species: Mus musculus (house mouse)
C;Date: 09-Mar-1990 #sequence_revision 09-Mar-1990 #text_change 16-Aug-1996
C; Accession: B33932
R; Baccala, R.; Vo Quang, T.; Gilbert, M.; Ternynck, T.; Avrameas, S.
Proc. Natl. Acad. Sci. U.S.A. 86, 4624-4628, 1989
A; Title: Two murine natural polyreactive autoantibodies are encoded by
nonmutated germ-line genes.
A; Reference number: A33932; MUID: 89282823; PMID: 2499887
A; Accession: B33932
A; Status: preliminary
A; Molecule type: mRNA
```

```
A; Cross-references: GB:M27107
C; Keywords: immunoglobulin
  Query Match
                          40.0%; Score 2; DB 2; Length 6;
  Best Local Similarity 100.0%; Pred. No. 2.8e+05;
  Matches
            2; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
Qу
            3 LR 4
              - | |
Db
            3 LR 4
RESULT 48
I59142
platelet-derived growth factor B chain - mouse (fragment)
C; Species: Mus musculus (house mouse)
C;Date: 02-Jul-1996 #sequence_revision 02-Jul-1996 #text_change 05-Nov-1999
C; Accession: I59142
R; Pech, M.; Gazit, A.; Arnstein, P.; Aaronson, S.A.
Proc. Natl. Acad. Sci. U.S.A. 86, 2693-2697, 1989
A; Title: Generation of fibrosarcomas in vivo by a retrovirus that expressed the
normal B chain of platelet-derived growth factor and mimics the alternative
splice pattern of the v-sis oncogene.
A; Reference number: I59142; MUID: 89202393; PMID: 2649890
A; Accession: I59142
A; Status: preliminary; translated from GB/EMBL/DDBJ
A; Molecule type: mRNA
A; Residues: 1-6 < RES>
A; Cross-references: GB: M26180; NID: g516624; PIDN: AAA39905.1; PID: g516625
  Query Match
                          40.0%; Score 2; DB 2; Length 6;
  Best Local Similarity 100.0%; Pred. No. 2.8e+05;
            2; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                              0;
            2 VL 3
QУ
Db
            5 VL 6
RESULT 49
PT0560
T-cell receptor beta chain V-D-J region (126-1CE) - mouse (fragment)
C; Species: Mus musculus (house mouse)
C;Date: 17-Jul-1992 #sequence_revision 17-Jul-1992 #text_change 30-May-1997
C; Accession: PT0560
R; Feeney, A.J.
J. Exp. Med. 174, 115-124, 1991
A; Title: Junctional sequences of fetal T cell receptor beta chains have few N
regions.
A; Reference number: PT0509; MUID: 91277601; PMID: 1711558
A; Accession: PT0560
A; Status: translation not shown
A; Molecule type: mRNA
A; Residues: 1-6 < FEE>
A; Experimental source: day 18 fetal thymus, strain BALB/c
C; Keywords: T-cell receptor
```

A; Residues: 1-6 <BAC>

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Query Match
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  Best Local Similarity 100.0%; Pred. No. 2.8e+05;
          2; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps 0;
Qу
           2 VL 3
              3 VL 4
Db
RESULT 50
ECMUCR
catch-relaxing peptide - blue mussel
N; Alternate names: CARP
C; Species: Mytilus edulis (blue mussel)
C;Date: 20-Jun-2000 #sequence_revision 20-Jun-2000 #text_change 20-Jun-2000
C; Accession: A29342
R; Hirata, T.; Kubota, I.; Takabatake, I.; Kawahara, A.; Shimamoto, N.; Muneoka,
Υ.
Brain Res. 422, 374-376, 1987
A; Title: Catch-relaxing peptide isolated from Mytilus pedal ganglia.
A; Reference number: A29342; MUID: 88052022; PMID: 3676797
A; Accession: A29342
A; Molecule type: protein
A; Residues: 1-7 <HIR>
C; Comment: This peptide exhibits both potentiating (contraction) and inhibitory
(relaxation) effects on the anterior byssus retractor muscle.
C; Superfamily: unassigned animal peptides
C; Keywords: amidated carboxyl end; hormone; retractor muscle
F;7/Modified site: amidated carboxyl end (Leu) #status experimental
 Query Match
                         40.0%; Score 2; DB 2; Length 7;
 Best Local Similarity 100.0%; Pred. No. 2.8e+05;
 Matches
          2; Conservative 0; Mismatches 0; Indels 0; Gaps
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Qу
           3 LR 4
Db
           5 LR 6
Search completed: November 28, 2003, 15:42:04
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Job time : 22 secs

GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.

OM protein - protein search, using sw model

Run on: November 28, 2003, 15:39:24; Search time 10 Seconds

(without alignments)

23.513 Million cell updates/sec

Title: US-09-228-866-46

Perfect score: 5

Sequence: 1 XVLRX 5

Scoring table: OLIGO

Gapop 60.0 , Gapext 60.0

Searched: 127863 seqs, 47026705 residues

Word size : 0

Total number of hits satisfying chosen parameters: 2296

Minimum DB seq length: 5
Maximum DB seq length: 33

Post-processing: Listing first 100 summaries

Database : SwissProt 41:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result		% Query				
No.	Score	_	Length	DB	ID	Description
1 2	3 3	60.0 60.0	20	1	CISY_STRHY	P20903 streptomyce
3	3	60.0	20 20	1 1	OMPW_VIBAL PUFK_RHOSH	P83151 vibrio algi Q53121 rhodobacter
4	3	60.0	26	1	RL36_DESDE	Q46501 desulfovibr
5 6	3 3	60.0 60.0	27 29	1	L52_ADE07 COA1 BPI22	P05663 human adeno P15413 bacteriopha
7	3	60.0	31	1	GT_SERMA	P22416 serratia ma
8	3	60.0	31	1	PETL_MESVI	Q9mun4 mesostigma
9 10	2 2	40.0	6 7	1	ACPH_RABIT CARP MYTED	P25154 oryctolagus
11	2	40.0	7	1	FAR1 HELTI	P10420 mytilus edu P41871 helisoma tr
12	2	40.0	7	1	FAR1_MACRS	P83274 macrobrachi
13 14	2 2	40.0	7	1	FAR1_PROCL	P38499 procambarus
15	2	40.0	7 7	1 1	FAR2_ASCSU FAR2_PROCL	P31890 ascaris suu P38498 procambarus
16	2	40.0	8	1	CAD1 ENTFA	P13268 enterococcu
17	2	40.0	8	1	COW2_CONPU	P58785 conus purpu

18	2	40.0	8	1	FAR1 PANRE	P41872	panagrellus
19	2	40.0	8	1	FAR1 PENMO		penaeus mon
20	2	40.0	8	1	FAR2 MACRS		macrobrachi
21	2	40.0	8	1	FAR3 HOMAM		homarus ame
22	2	40.0	8	1	FAR4 HOMAM		homarus ame
23	2	40.0	8	1	FAR4 MACRS		macrobrachi
24	2	40.0	9	1			
					BS43_SERPL		serratia pl
25	2	40.0	9	1	FAR2_PANRE		panagrellus
26	2	40.0	9	1	FAR3_MACRS		macrobrachi
27	2	40.0	9	1	FAR3_PENMO		penaeus mon
28	2	40.0	9	1	FAR4_PENMO		penaeus mon
29	2	40.0	9	1	FAR5_PENMO	P83320	penaeus mon
30	2	40.0	9	1	FAR6_MACRS	P83279	macrobrachi
31	2	40.0	9	1	FAR8_MACRS	P83281	macrobrachi
32	2	40.0	9	1	FAR9 ASCSU	P43172	ascaris suu
33	2	40.0	9	1	FARP CALSI		callinectes
34	2	40.0	9	1	FIBB ERYPA		erythrocebu
35	2	40.0	10	1	BRK ONCMY		oncorhynchu
36	2	40.0	10	1	ESL LACCA	-	lactobacill
37	2	40.0	10	1	FAR2 PENMO		penaeus mon
38	2	40.0	10	1	FAR5 MACRS		macrobrachi
39	2	40.0	10	1	FAR7 MACRS		
40	2	40.0			_		macrobrachi
			10	1	FARP_LOCMI		locusta mig
41	2	40.0	10	1	FARP_MANSE		manduca sex
42	2	40.0	10	1	LCMS_LEUMA		leucophaea
4.3	2	40.0	10	1	PORB_METTM		methanobact
44	2	40.0	10	1	TKU1_UREUN		urechis uni
45	2	40.0	10	1	UPA5_HUMAN	P30091	homo sapien
46	2	40.0	11	1	ES1_RAT	P56571	rattus norv
47	2	40.0	11	1	FAR6_PENMO	P83321	penaeus mon
48	2	40.0	12	1	RR16 GINBI	P36207	ginkgo bilo
49	2	40.0	12	1	TM2A METMA		methanosarc
50	2	40.0	13	1	CRBL VESCR		vespa crabr
51	2	40.0	13	1	FARB ASCSU		ascaris suu
52	2	40.0	13	1	FIBB RABIT		oryctolagus
53	2	40.0	13	1	PEDI HYDAT		hydra atten
54	2	40.0	13	1	SA2A ONCMY		oncorhynchu
55	2	40.0	13	1	SA2B_ONCMY		oncorhynchu
56	2	40.0	13	1	TEMA RANTE		rana tempor
57	2	40.0	13	1	_		
58	2	40.0	13	1	TEME_RANTE TEMF RANTE		rana tempor
59					—		rana tempor
	2	40.0	13	1	UN12_CLOPA		clostridium
60	2	40.0	13	1	YPNP_PHOLU		photorhabdu
61	2	40.0	14	1	BGAT_MOUSE		m histo-blo
62	2	40.0	14	1	KLPS_SCARA		scaptocosa
63	2	40.0	14	1	LPER_BACLI		bacillus li
64	2	40.0	14	1	LPW_CITFR		citrobacter
65	2	40.0	14	1	LPW_ECOLI	P03053	escherichia
66	2	40.0	14	1	MAST_POLJA	P01517	polistes ja
67	2	40.0	14	1	MAST_VESBA		vespa basal
68	2	40.0	14	1	MAST_VESOR		vespa orien
69	2	40.0	14	1	NEJ2_FASHE		fasciola he
70	2	40.0	15	1	ACT PINPS		pinus pinas
71	2	40.0	15	1	AF1L MALPA		malva parvi .
72	2	40.0	15	1	ATP2 PINPS		pinus pinas
73	2	40.0	15	1	CDN4 LITCE		litoria cae
74	2	40.0	15	1	GTS ASADI		asaphis dic
	-	- 0 . 0	1.0	-	0.0_10001	F03240	asapiris are

```
P12665 cricetidae
P11918 lumbricus t
P21234 thermus the
P29265 prunus sero
P21586 caretta car
P80633 zea mays (m
P80634 zea mays (m
Q02006 rhodopseudo
P17916 pseudomonas
P83187 basella alb
P81187 bos taurus
P18638 coturnix co
P81343 clostridium
P11917 arenicola m
P82892 trimeresuru
Q02210 pseudomonas
P81784 porphyromon
P10521 megabombus
P07493 megabombus
P07494 megabombus
P07495 megabombus
P07496 megabombus
P07496 megabombus
P08952 rana rugosa
P27642 bacillus li
P82032 uperoleia i
                                                           40.0 15 1 IRBP_CRISP
     75
                                                                                                                                                                                                                                                          P12665 cricetidae
     76
                                               2 40.0
                                                                                                             15 1 KLOM_LUMTE
                 2 40.0 15 1 KLOM_LOWTE
2 40.0 15 1 LPL_THETH
2 40.0 15 1 PH3_PRUSE
2 40.0 15 1 RKGG_CARCR
2 40.0 15 1 UC27_MAIZE
2 40.0 15 1 UC28_MAIZE
2 40.0 15 1 YAA3_RHOPA
2 40.0 16 1 ALRX_PSEPU
2 40.0 16 1 BRB_BASAL
2 40.0 16 1 CFAB_BOVIN
2 40.0 16 1 HBD_CLOPA
2 40.0 16 1 HBD_CLOPA
2 40.0 16 1 KTRC_AREMA
2 40.0 16 1 PA21_TRIST
2 40.0 16 1 YMOR_PSEPU
2 40.0 16 1 YMOR_PSEPU
2 40.0 17 1 BOL1_MEGPE
2 40.0 17 1 BOL1_MEGPE
2 40.0 17 1 BOL2_MEGPE
2 40.0 17 1 BOL3_MEGPE
2 40.0 17 1 BOL4_MEGPE
2 40.0 17 1 BOL5_MEGPE
2 40.0 17 1 BOL5_MEGPE
2 40.0 17 1 BOL5_MEGPE
2 40.0 17 1 RANR_RANRU
2 40.0 17 1 SP51_BACLI
2 40.0 17 1 UP31_UPEIN
2 40.0 17 1 UP32_UPEIN
     77
                                               2 40.0
                                                                                                       15 1 LPL THETH
     78
     79
     80
     81
     82
     83
     84
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     87
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     89
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     91
     92
     93
     94
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     97
     98
     99
100
```

ALIGNMENTS

RESULT 1

```
CISY STRHY
     CISY STRHY
                  STANDARD;
                              PRT;
                                           20 AA.
AC
     P20903;
DT
     01-FEB-1991 (Rel. 17, Created)
DT
     01-FEB-1991 (Rel. 17, Last sequence update)
     15-SEP-2003 (Rel. 42, Last annotation update)
DE
     Citrate synthase (EC 2.3.3.1) (Fragment).
GN
     GLTA.
OS
     Streptomyces hygroscopicus.
OC
     Bacteria; Actinobacteria; Actinobacteridae; Actinomycetales;
OC
     Streptomycineae; Streptomycetaceae; Streptomyces.
OX
     NCBI TaxID=1912;
RN
     [1]
RΡ
     SEQUENCE.
RC
     STRAIN=SF1293;
    MEDLINE=90334852; PubMed=1368511;
RX
RA
     Shimotohno K.W., Imai S., Murakami T., Seto H.;
     "Purification and characterization of citrate synthase from
RT
     Streptomyces hygroscopicus SF-1293 and comparison of its properties
RT
    with those of 2-phosphinomethylmalic acid synthase.";
RT
    Agric. Biol. Chem. 54:463-470(1990).
RL
    -!- CATALYTIC ACTIVITY: Acetyl-CoA + H(2)O + oxaloacetate = citrate +
CC
CC
     -!- ENZYME REGULATION: ALLOSTERICALLY INHIBITED BY NADH.
CC
     -!- PATHWAY: Tricarboxylic acid cycle.
```

```
CC
     -!- SUBUNIT: Homohexamer.
CC
     -!- MISCELLANEOUS: CITRATE SYNTHASE IS FOUND IN NEARLY ALL CELLS
CC
         CAPABLE OF OXIDATIVE METABOLISM.
CC
     -!- SIMILARITY: Belongs to the citrate synthase family.
DR
     PIR; PQ0046; PQ0046.
DR
     InterPro; IPR002020; Citrate synt.
DR
     PROSITE; PS00480; CITRATE SYNTHASE; PARTIAL.
     Transferase; Tricarboxylic acid cycle; Allosteric enzyme.
KW
FT
     NON TER
                  20
                        20
SQ
     SEQUENCE
                20 AA; 2234 MW; C527EC7A87119597 CRC64;
  Query Match
                         60.0%; Score 3; DB 1; Length 20;
  Best Local Similarity 100.0%; Pred. No. 2.6e+02;
            3; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
                                                                          0;
            2 VLR 4
Qу
              Db
            6 VLR 8
RESULT 2
OMPW VIBAL
    OMPW VIBAL
ID
                   STANDARD;
                                  PRT;
                                          20 AA.
AC
     P83151;
DT
     28-FEB-2003 (Rel. 41, Created)
     28-FEB-2003 (Rel. 41, Last sequence update)
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
DE
     Outer membrane protein W (Outer membrane protein 25Va) (Omp25Va)
DE
     (Fragment).
GN
     OMPW.
OS
    Vibrio alginolyticus.
OC
     Bacteria; Proteobacteria; Gammaproteobacteria; Vibrionales;
OC
     Vibrionaceae; Vibrio.
OX
     NCBI TaxID=663;
RN
     [1]
RP
     SEQUENCE.
RC
     STRAIN=NCIMB 1903T;
RA
    Onji M., Hirabayashi J., Suzuki S.,
    "Characterization of major outer membrane proteins of Vibrio
RT
RT
    alginolyticus and the stability against proteases.";
    Microbes Environ. 0:0-0(2002).
RL
CC
     -!- SUBCELLULAR LOCATION: Outer membrane.
CC
     -!- SIMILARITY: BELONGS TO THE OMPW/ALKL FAMILY.
KW
    Outer membrane.
FT
    NON TER
               20
                        20
SQ
    SEQUENCE 20 AA; 2096 MW; D29EE7FCA16C0D37 CRC64;
 Query Match
                         60.0%; Score 3; DB 1; Length 20;
 Best Local Similarity 100.0%; Pred. No. 2.6e+02;
 Matches
           3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                            0;
Qу
           2 VLR 4
              | \cdot |
           7 VLR 9
```

```
PUFK RHOSH
ΙD
     PUFK RHOSH
                 STANDARD; PRT; 20 AA.
AC
     Q53121; 008033;
     16-OCT-2001 (Rel. 40, Created)
DT
DT
    16-OCT-2001 (Rel. 40, Last sequence update)
    16-OCT-2001 (Rel. 40, Last annotation update)
DT
DE
    Transcriptional regulatory protein pufK.
GN
     PUFK.
OS
    Rhodobacter sphaeroides (Rhodopseudomonas sphaeroides).
OC
    Bacteria; Proteobacteria; Alphaproteobacteria; Rhodobacterales;
OC
    Rhodobacteraceae; Rhodobacter.
OX
    NCBI TaxID=1063;
RN
    [1]
RP
    SEQUENCE FROM N.A.
RC
    STRAIN=ATCC 17023 / 2.4.1 / NCIB 8253 / DSM 158;
RX
    MEDLINE=96349111; PubMed=8760918;
RA
    Gong L., Kaplan S.;
RT
    "Translational control of puf operon expression in Rhodobacter
    sphaeroides 2.4.1.";
RT
RL
    Microbiology 142:2057-2069(1996).
RN
    SEQUENCE FROM N.A.
RP
RC
    STRAIN=ATCC 17023 / 2.4.1 / NCIB 8253 / DSM 158;
RA
    McGlynn P.;
RT
    "R.sphaeroides genes bchC, bchX, bchY, bchZ and pufQ.";
RL
    Submitted (MAR-1999) to the EMBL/GenBank/DDBJ databases.
RN
RΡ
    SEQUENCE FROM N.A.
RC
    STRAIN=ATCC 17023 / 2.4.1 / NCIB 8253 / DSM 158;
RX
    MEDLINE=20115911; PubMed=10648776;
RA
    Choudhary M., Kaplan S.;
RT
    "DNA sequence analysis of the photosynthesis region of Rhodobacter
    sphaeroides 2.4.1.";
RT
    Nucleic Acids Res. 28:862-867(2000).
RL
CC
    -!- FUNCTION: INVOLVED IN THE TRANSCRIPTIONAL REGULATION OF PUFB.
CC
    CC
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    ______
DR
    EMBL; S82643; AAB46798.1; -.
    EMBL; AJ010302; CAB38751.1; -.
DR
DR
    EMBL; AF195122; AAF24301.1; -.
    PIR; T50757; T50757.
DR
KW
    Transcription regulation.
SO
    SEQUENCE 20 AA; 2262 MW; 764DBD64B9DD990C CRC64;
 Query Match
                        60.0%; Score 3; DB 1; Length 20;
 Best Local Similarity 100.0%; Pred. No. 2.6e+02;
         3; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
 Matches
```

```
RESULT 4
RL36 DESDE
    RL36 DESDE
                  STANDARD;
                               PRT;
                                        26 AA.
    Q46501;
AC
DT
     01-NOV-1997 (Rel. 35, Created)
DT
    01-NOV-1997 (Rel. 35, Last sequence update)
DT
    28-FEB-2003 (Rel. 41, Last annotation update)
DE
    50S ribosomal protein L36 (Fragment).
GN
OS
    Desulfovibrio desulfuricans.
OC
    Bacteria; Proteobacteria; Deltaproteobacteria; Desulfovibrionales;
OC.
    Desulfovibrionaceae; Desulfovibrio.
    NCBI_TaxID=876;
OX
RN
    [1]
RP
    SEQUENCE FROM N.A.
RC
    STRAIN=G20;
RA
    English R.S., Wall J.D.;
    Submitted (JUN-1996) to the EMBL/GenBank/DDBJ databases.
RL
     -!- SIMILARITY: BELONGS TO THE L36P FAMILY OF RIBOSOMAL PROTEINS.
CC
     ------
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CC
    DR
    EMBL; U57079; AAB01996.1; -.
DR
    HSSP; P80256; 1DFE.
    HAMAP; MF_00251; -; 1.
DR
DR
    InterPro; IPR000473; Ribosomal L36.
DR
    Pfam; PF00444; Ribosomal L36; 1.
DR
    TIGRFAMs; TIGR01022; rpmJ bact; 1.
DR
    PROSITE; PS00828; RIBOSOMAL L36; PARTIAL.
KW
    Ribosomal protein.
FT
    NON TER
                26
                       26
    SEQUENCE
              26 AA; 3022 MW; FB13A4590E5202D4 CRC64;
SQ
 Query Match
                        60.0%; Score 3; DB 1; Length 26;
 Best Local Similarity 100.0%; Pred. No. 3.3e+02;
          3; Conservative 0; Mismatches 0; Indels
                                                                       0;
          2 VLR 4
Qу
             111
Db
          22 VLR 24
RESULT 5
L52 ADE07
ID
    L52 ADE07
                  STANDARD;
                                PRT:
                                       27 AA.
AC
    P05663;
DT
    01-NOV-1988 (Rel. 09, Created)
DT
    01-NOV-1988 (Rel. 09, Last sequence update)
```

```
DT
     01-NOV-1997 (Rel. 35, Last annotation update)
DΕ
     Late L1 52 kDa protein (Fragment).
OS
     Human adenovirus type 7.
OC
     Viruses; dsDNA viruses, no RNA stage; Adenoviridae; Mastadenovirus.
OX
     NCBI TaxID=10519;
RN
     [1]
RP
     SEQUENCE FROM N.A.
RC
     STRAIN=Gomen;
RX
     MEDLINE=83183660; PubMed=6301944;
     Engler J.A., Hoppe M.S., van Bree M.P.;
RA
RT
     "The nucleotide sequence of the genes encoded in early region 2b of
RT
     human adenovirus type 7.";
     Gene 21:145-159(1983).
RL
     -!- FUNCTION: INVOLVED IN VIRION ASSEMBLY.
CC
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CC
     _____
CC
DR
     EMBL; X03000; CAA26776.1; -.
DR
     InterPro; IPR004292; Adeno_52K.
DR
     Pfam; PF03052; Adeno 52K; 1.
KW
    Late protein.
FT
     NON TER 27
                      27
     SEQUENCE 27 AA; 3108 MW; E5A8288B117BB533 CRC64;
SO
                        60.0%; Score 3; DB 1; Length 27;
  Best Local Similarity 100.0%; Pred. No. 3.4e+02;
  Matches
          3; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
           2 VLR 4
Qу
             Dh
          4 VLR 6
RESULT 6
COA1 BPI22
    COA1 BPI22
                  STANDARD; PRT; 29 AA.
AC
    P15413;
DТ
    01-APR-1990 (Rel. 14, Created)
    01-APR-1990 (Rel. 14, Last sequence update)
DT
    01-OCT-1996 (Rel. 34, Last annotation update)
DE
    Coat protein C, polypeptide I.
GN
    VII.
    Bacteriophage I2-2.
OS
OC
    Viruses; ssDNA viruses; Inoviridae; Inovirus.
OX
    NCBI_TaxID=10869;
RN
    [1]
    SEQUENCE FROM N.A.
RP
RX
    MEDLINE=92211729; PubMed=1556749;
RA
    Stassen A.P., Schonmakers E.F., Yu M., Schoenmakers J.G.,
    Konings R.N.H.;
RA
RT
    "Nucleotide sequence of the genome of the filamentous bacteriophage
```

```
RT
     12-2: module evolution of the filamentous phage genome.";
RL
     J. Mol. Evol. 34:141-152(1992).
CC
     -!- SUBUNIT: COAT PROTEIN C IS COMPOSED OF TWO SUBUNITS, POLYPEPTIDE I
CC
        (GENE VII) AND POLYPEPTIDE II (GENE IX).
CC
     CC
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CC
DR
     EMBL; X14336; CAA32515.1; -.
DR
     PIR; S08088; S08088.
KW
     Coat protein.
SO
     SEQUENCE 29 AA; 2966 MW; DB7DCC3C5EDCBAD3 CRC64:
 Query Match
                         60.0%; Score 3; DB 1; Length 29;
  Best Local Similarity 100.0%; Pred. No. 3.7e+02;
  Matches 3; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                         0;
          2 VLR 4
QУ
             27 VLR 29
Db
RESULT 7
GT SERMA
    GT SERMA
                  STANDARD; PRT; 31 AA.
ΙD
AC
    P22416;
DT
    01-AUG-1991 (Rel. 19, Created)
    01-AUG-1991 (Rel. 19, Last sequence update)
    15-DEC-1998 (Rel. 37, Last annotation update)
DT
    Glutathione S-transferase GST-7.3 (EC 2.5.1.18) (Fragment).
DE
OS
    Serratia marcescens.
OC
    Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
OC
    Enterobacteriaceae; Serratia.
OX
    NCBI TaxID=615;
RN
    [1]
RΡ
    SEQUENCE.
RC
    STRAIN=CIP 6755;
RX
    MEDLINE=91198121; PubMed=2015287;
RA
    di Ilio C., Aceto A., Piccolomini R., Allocati N., Faraone A.,
RA
    Bucciarelli T., Barra D., Feferici G.;
RT
    "Purification and characterization of a novel glutathione transferase
RT
    from Serratia marcescens.";
    Biochim. Biophys. Acta 1077:141-146(1991).
RL
    -!- FUNCTION: CONJUGATION OF REDUCED GLUTATHIONE TO A WIDE NUMBER
CC
CC
        OF EXOGENOUS AND ENDOGENOUS HYDROPHOBIC ELECTROPHILES.
    -!- CATALYTIC ACTIVITY: RX + glutathione = HX + R-S-glutathione.
CC
CC
    -!- SUBUNIT: Homodimer.
    -!- SUBCELLULAR LOCATION: Cytoplasmic.
CC
CC
    -!- SIMILARITY: BELONGS TO THE GST SUPERFAMILY. BETA SUBFAMILY.
DR
    PIR; S14727; S14727.
DR HSSP; P39100; 1A0F.
KW
   Transferase.
```

```
ACT_SITE 10 10 BY SIMILARITY. NON_TER 31 31
FT
FT
     SEQUENCE 31 AA; 3434 MW; AD993D56CD9AB0D5 CRC64;
SQ
  Query Match
                        60.0%; Score 3; DB 1; Length 31;
  Best Local Similarity 100.0%; Pred. No. 3.9e+02;
  Matches 3; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
           2 VLR 4
QУ
              +++
          17 VLR 19
Db
RESULT 8
PETL MESVI
     PETL MESVI
                  STANDARD;
                             PRT; 31 AA.
AC
     Q9MUN4;
     16-OCT-2001 (Rel. 40, Created)
DT
DT
     16-OCT-2001 (Rel. 40, Last sequence update)
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
DΕ
     Cytochrome b6-f complex subunit VI (Cytochrome b6f complex subunit
DΕ
     petL).
GN
     PETL.
OS
     Mesostiqma viride.
OG
     Chloroplast.
OC.
     Eukaryota; Viridiplantae; Streptophyta; Mesostigmatophyceae;
OC
     Mesostigmatales; Mesostigmataceae; Mesostigma.
OX
     NCBI TaxID=41882;
RN
     [1]
RP
     SEQUENCE FROM N.A.
RC
     STRAIN=NIES-296;
RX
     MEDLINE=20150907; PubMed=10688199;
RA
     Lemieux C., Otis C., Turmel M.;
RT
     "Ancestral chloroplast genome in Mesostigma viride reveals an early
RT
     branch of green plant evolution.";
     Nature 403:649-652(2000).
RL
CC
     -!- FUNCTION: THE CYTOCHROME B6-F COMPLEX FUNCTIONS IN THE LINEAR
CC
        CROSS-MEMBRANE TRANSPORT OF ELECTRONS BETWEEN PHOTOSYSTEM II AND
CC
        I, AS WELL AS IN CYCLIC ELECTRON FLOW AROUND PHOTOSYSTEM I. PETL
        IS IMPORTANT FOR PHOTOAUTOTROPHIC GROWTH AS WELL AS FOR ELECTRON
CC
        TRANSFER EFFICIENCY AND STABILITY OF THE CYTOCHROME B6-F COMPLEX
CC
        (By similarity).
CC
     -!- SUBCELLULAR LOCATION: Thylakoid membrane-associated (By
CC
CC
        similarity).
     -!- SIMILARITY: Belongs to the petL family.
CC
CC
     ______
CC
    This SWISS-PROT entry is copyright. It is produced through a collaboration
CC
    between the Swiss Institute of Bioinformatics and the EMBL outstation -
CC
    the European Bioinformatics Institute. There are no restrictions on its
CC
    use by non-profit institutions as long as its content is in no way
CC
    modified and this statement is not removed. Usage by and for commercial
    entities requires a license agreement (See http://www.isb-sib.ch/announce/
CC
CC
    or send an email to license@isb-sib.ch).
CC
DR
    EMBL; AF166114; AAF43866.1; -.
DR
    HAMAP; MF 00433; -; 1.
   Pfam; PF05115; PetL; 1.
```

```
KW
     Electron transport; Chloroplast; Respiratory chain; Transmembrane;
KW
     Thylakoid.
FT
     TRANSMEM
                         24
                                  POTENTIAL.
SQ
     SEOUENCE
                31 AA; 3397 MW; 5BF71DAF8A8B9743 CRC64;
  Query Match
                          60.0%; Score 3; DB 1; Length 31;
  Best Local Similarity 100.0%; Pred. No. 3.9e+02;
  Matches
            3; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
                                                                             0;
            2 VLR 4
Qу
              Dh
           24 VLR 26
RESULT 9
ACPH RABIT
     ACPH RABIT
ΙD
                    STANDARD;
                                   PRT:
                                          6 AA.
AC
     P25154;
     01-MAY-1992 (Rel. 22, Created)
DT
DT
     01-MAY-1992 (Rel. 22, Last sequence update)
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
DE
     Acylamino-acid-releasing enzyme (EC 3.4.19.1) (Acyl-peptide hydrolase)
DE
     (APH) (Acylaminoacyl-peptidase) (Fragment).
GN
     APEH.
OS
     Oryctolagus cuniculus (Rabbit).
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
     Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
OC
OX
     NCBI TaxID=9986;
RN
     [1]
RΡ
     SEQUENCE.
RC
     TISSUE=Muscle;
RX
     MEDLINE=92222120; PubMed=1807161;
RA
     Krishna R.G., Chin C.C.Q., Wold F.;
RT
     "N-terminal sequence analysis of N alpha-acetylated proteins after
RT
     unblocking with N-acylaminoacyl-peptide hydrolase.";
RL
     Anal. Biochem. 199:45-50(1991).
CC
     -!- FUNCTION: THIS ENZYME CATALYZES THE HYDROLYSIS OF THE AMINO-
CC
         TERMINAL PEPTIDE BOND OF AN N-ACETYLATED PEPTIDE TO GENERATE
CC
         AN N-ACETYLATED AA AND A PEPTIDE WITH A FREE AMINO-TERMINUS.
CC
         IT PREFERENTIALLY CLEAVES OFF AC-ALA, AC-MET AND AC-SER.
CC
     -!- CATALYTIC ACTIVITY: Acylaminoacyl-peptide + H(2)0 = acylamino acid
CC
         + peptide.
CC
     -!- SUBUNIT: Homotetramer.
     -!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY S9C.
CC
DR
     PIR; A49792; A49792.
DR
    MEROPS; S09.004; -.
DR
    InterPro; IPR002471; Prol endopep ser.
DR
    PROSITE; PS00708; PRO ENDOPEP SER; PARTIAL.
KW
    Hydrolase; Acetylation.
FT
    MOD RES
                  1
                         1
                                 ACETYLATION.
    NON TER
FT
                  6
                         6
SO
    SEQUENCE
               6 AA; 775 MW; 6732D6C40B16F000 CRC64:
 Ouery Match
                         40.0%; Score 2; DB 1; Length 6;
 Best Local Similarity 100.0%; Pred. No. 1.3e+05;
          2; Conservative 0; Mismatches 0; Indels
                                                             0; Gaps
                                                                            0;
```

```
2 VL 3
Qу
            5 VL 6
Db
RESULT 10
CARP MYTED
     CARP MYTED
                    STANDARD;
                                   PRT;
                                           7 AA.
AC
     P10420;
     01-MAR-1989 (Rel. 10, Created)
DT
DT
     01-MAR-1989 (Rel. 10, Last sequence update)
DT
     01-MAR-1989 (Rel. 10, Last annotation update)
DE
     Catch-relaxing peptide (CARP).
OS
     Mytilus edulis (Blue mussel).
OC.
     Eukaryota; Metazoa; Mollusca; Bivalvia; Pteriomorphia; Mytiloida;
OC
     Mytiloidea; Mytilidae; Mytilus.
OX
     NCBI TaxID=6550;
RN
     [1]
RΡ
     SEQUENCE.
     MEDLINE=88052022; PubMed=3676797;
RX
     Hirata T., Kubota I., Takabatake I., Kawahara A., Shimamoto N.,
RA
RA
     Muneoka Y.;
     "Catch-relaxing peptide isolated from Mytilus pedal ganglia.";
RT
RL
     Brain Res. 422:374-376(1987).
CC
     -!- FUNCTION: THIS PEPTIDE EXHIBITS BOTH POTENTIATING (CONTRACTION)
         AND INHIBITORY (RELAXATION) EFFECTS ON THE ANTERIOR BYSSUS
CC
         RETRACTOR MUSCLE.
CC
DR
     PIR; A29342; ECMUCR.
KW
     Hormone; Amidation.
FT
     MOD RES
                7
                          7
                                  AMIDATION.
SO
     SEQUENCE 7 AA; 831 MW; 6734072687669DB0 CRC64;
  Query Match
                          40.0%; Score 2; DB 1; Length 7;
  Best Local Similarity
                          100.0%; Pred. No. 1.3e+05;
  Matches
            2; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                              0;
Qу
            3 LR 4
              -11
Db
            5 LR 6
RESULT 11
FAR1 HELTI
ID
     FAR1 HELTI
                    STANDARD;
                                   PRT;
                                            7 AA.
AC
     P41871;
DT
     01-NOV-1995 (Rel. 32, Created)
DT
     01-NOV-1995 (Rel. 32, Last sequence update)
     01-NOV-1995 (Rel. 32, Last annotation update)
DT
DE
     FMRFamide-like neuropeptide GDPFLRF-amide.
OS
     Helisoma trivolvis (Snail).
OC
     Eukaryota; Metazoa; Mollusca; Gastropoda; Pulmonata; Basommatophora;
OC
     Lymnaeoidea; Planorbidae; Helisoma.
OX
    NCBI TaxID=27815;
RN
    [1]
RP
     SEQUENCE.
RC
    TISSUE=Kidney;
    MEDLINE=94286417; PubMed=7912428;
RX
```

```
RA
     Madrid K.P., Price D.A., Greenberg M.J., Khan H.R., Saleuddin A.S.M.;
RT
     "FMRFamide-related peptides from the kidney of the snail, Helisoma
RT
     trivolvis.";
RL
     Peptides 15:31-36(1994).
CC
     -!- FUNCTION: APPEARS TO BE INVOLVED IN OSMOREGULATION BY AFFECTING
CC
         THE KIDNEY, MANTLE AND SKIN.
CC
     -!- TISSUE SPECIFICITY: KIDNEY, SKIN, MANTLE AND THE HEMOLYMPH.
CC
     -!- SIMILARITY: BELONGS TO THE FARP (FMRFAMIDE RELATED PEPTIDE)
CC
         FAMILY.
KW
     Neuropeptide; Amidation.
FT
     MOD RES
                                  AMIDATION.
SO
     SEQUENCE
                7 AA; 851 MW; 69D40729D76AA810 CRC64;
  Query Match
                          40.0%; Score 2; DB 1; Length 7;
  Best Local Similarity 100.0%; Pred. No. 1.3e+05;
  Matches
            2; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
Qу
            3 LR 4
              -11
Dh
            5 LR 6
RESULT 12
FAR1 MACRS
ΙD
     FAR1 MACRS
                    STANDARD;
                                   PRT;
                                           7 AA.
AC
     P83274;
     28-FEB-2003 (Rel. 41, Created)
DT
     28-FEB-2003 (Rel. 41, Last sequence update)
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
     FMRFamide-like neuropeptide FLP1 (DRNFLRF-amide).
DΕ
OS
     Macrobrachium rosenbergii (Giant fresh water prawn).
OC
     Eukaryota; Metazoa; Arthropoda; Crustacea; Malacostraca;
OC
     Eumalacostraca; Eucarida; Decapoda; Pleocyemata; Caridea;
OC
     Palaemonoidea; Palaemonidae; Macrobrachium.
OX
     NCBI TaxID=79674;
RN
     [1]
     SEQUENCE, AND MASS SPECTROMETRY.
RΡ
RC
     TISSUE=Eyestalk;
RA
     Sithigorngul P., Saraithongkum W., Jaideechoey S., Longyant S.,
     Sithigorngul W.;
RA
     "Novel FMRFamide-like neuropeptides from the eyestalk of the giant
ŔТ
RT
     freshwater prawn Macrobrachium rosenbergii.";
RL
     Comp. Biochem. Physiol. 120B:587-595(1998).
     -!- MASS SPECTROMETRY: MW=965.7; METHOD=MALDI.
CC
CC
     -!- SIMILARITY: BELONGS TO THE FARP (FMRFAMIDE RELATED PEPTIDE)
CC
         FAMILY.
DR
     GO; GO:0007218; P:neuropeptide signaling pathway; TAS.
KW
     Neuropeptide; Amidation.
FT
     MOD RES
                                  AMIDATION.
SQ
     SEQUENCE
               7 AA; 967 MW; 69D40729C4540AC0 CRC64;
 Query Match
                          40.0%; Score 2; DB 1; Length 7;
 Best Local Similarity 100.0%; Pred. No. 1.3e+05;
           2; Conservative 0; Mismatches 0; Indels
                                                              0; Gaps
                                                                             0;
Qу
            3 LR 4
```

```
Db
```

```
RESULT 13
FAR1 PROCL
     FAR1 PROCL
                    STANDARD;
                                   PRT;
                                           7 AA.
AC
     P38499;
DT
     01-OCT-1994 (Rel. 30, Created)
DT
     01-OCT-1994 (Rel. 30, Last sequence update)
DT
     01-NOV-1995 (Rel. 32, Last annotation update)
DE
     Cardioexcitatory FMRFamide homolog NF1.
     Procambarus clarkii (Red swamp crayfish).
OS
OC
     Eukaryota; Metazoa; Arthropoda; Crustacea; Malacostraca;
OC
     Eumalacostraca; Eucarida; Decapoda; Pleocyemata; Astacidea;
OC
     Astacoidea; Cambaridae; Procambarus.
OX
     NCBI TaxID=6728;
RN
     [1]
RP
     SEQUENCE.
RC
     TISSUE=Pericardial organs;
RX
     MEDLINE=93248032; PubMed=8387183;
     Mercier A.J., Orchard I., Tebrugge V., Skerrett M.;
RA
     "Isolation of two FMRFamide-related peptides from crayfish
RT
RT
     pericardial organs.";
RL
     Peptides 14:137-143(1993).
CC
     -!- FUNCTION: INCREASES THE RATE AND AMPLITUDE OF SPONTANEOUS
CC
         CONTRACTIONS OF SEMI-ISOLATED HEARTS. INCREASES THE AMPLITUDE OF
CC
         EXCITATORY POSTSYNAPTIC POTENTIALS IN ABDOMINAL EXTENSOR MUSCLE.
CC
     -!- SIMILARITY: BELONGS TO THE FARP (FMRFAMIDE RELATED PEPTIDE)
CC
         FAMILY.
KW
     Neuropeptide; Amidation.
FT
     MOD RES
                   7
                                  AMIDATION.
SQ
     SEQUENCE
                7 AA; 966 MW; 69D40729C4540420 CRC64;
                          40.0%; Score 2; DB 1; Length 7;
  Query Match
  Best Local Similarity
                          100.0%; Pred. No. 1.3e+05;
  Matches
            2; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
                                                                              0;
QУ
            3 LR 4
              11
Db
            5 LR 6
RESULT 14
FAR2 ASCSU
     FAR2 ASCSU
                    STANDARD;
                                   PRT;
                                            7 AA.
     P31890;
AC
     01-JUL-1993 (Rel. 26, Created)
DT
     01-JUL-1993 (Rel. 26, Last sequence update)
DT
DT
     01-FEB-1996 (Rel. 33, Last annotation update)
DE
     FMRFamide-like neuropeptide AF2.
OS
     Ascaris suum (Pig roundworm) (Ascaris lumbricoides), and
OS
     Panagrellus redivivus.
     Eukaryota; Metazoa; Nematoda; Chromadorea; Ascaridida; Ascaridoidea;
OC
OC
     Ascarididae; Ascaris.
OX
    NCBI_TaxID=6253, 6233;
RN
     [1]
RP
     SEQUENCE.
```

```
RC
     SPECIES=A.suum;
RX
     MEDLINE=93324431; PubMed=8332542;
     Cowden C., Stretton A.O.W.;
RA
RT
     "AF2, an Ascaris neuropeptide: isolation, sequence, and bioactivity.";
RL
     Peptides 14:423-430(1993).
RN
     [2]
RΡ
     SEQUENCE.
RC
     SPECIES=P.redivivus;
RX
     MEDLINE=95060998; PubMed=7970891;
RA
     Maule A.G., Shaw C., Bowman J.W.;
     "The FMRFamide-like neuropeptide AF2 (Ascaris suum) is present in the
RТ
RT
     free-living nematode, Panagrellus redivivus (Nematoda, Rhabditida).";
RL
     Parasitology 109:351-356(1994).
CC
     -!- FUNCTION: HAS EFFECTS ON MUSCLE TENSION.
CC
     -!- TISSUE SPECIFICITY: FOUND IN THE NERVE CORDS AND A VARIETY OF
CC
         GANGLIA PARTICULARLY IN THE ANTERIOR REGIONS.
     -!- SIMILARITY: BELONGS TO THE FARP (FMRFAMIDE RELATED PEPTIDE)
CC
CC
         FAMILY.
KW
     Neuropeptide; Amidation.
FT
     MOD RES
                          7
                                  AMIDATION.
SO
     SEQUENCE 7 AA; 992 MW; 69D4073B5B11E350 CRC64;
  Query Match
                          40.0%; Score 2; DB 1; Length 7;
  Best Local Similarity
                          100.0%; Pred. No. 1.3e+05;
  Matches
           2; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
                                                                              0;
QУ
            3 LR 4
              | | |
            5 LR 6
Dh
RESULT 15
FAR2 PROCL
     FAR2 PROCL
                    STANDARD;
                                   PRT;
                                           7 AA.
AC
     P38498;
DT
     01-OCT-1994 (Rel. 30, Created)
     01-OCT-1994 (Rel. 30, Last sequence update)
DT
     01-NOV-1995 (Rel. 32, Last annotation update)
DT
DE
     Cardioexcitatory FMRFamide homolog DF2.
OS
     Procambarus clarkii (Red swamp crayfish).
OC
     Eukaryota; Metazoa; Arthropoda; Crustacea; Malacostraca;
OC
     Eumalacostraca; Eucarida; Decapoda; Pleocyemata; Astacidea;
OC
     Astacoidea; Cambaridae; Procambarus.
OX
     NCBI TaxID=6728;
RN
    [1]
RP
     SEQUENCE.
RC
    TISSUE=Pericardial organs;
RX
    MEDLINE=93248032; PubMed=8387183;
    Mercier A.J., Orchard I., Tebrugge V., Skerrett M.;
RA
    "Isolation of two FMRFamide-related peptides from crayfish
RT
RT
    pericardial organs.";
RL
    Peptides 14:137-143(1993).
     -!- FUNCTION: INCREASES THE RATE AND AMPLITUDE OF SPONTANEOUS
CC
         CONTRACTIONS OF SEMI-ISOLATED HEARTS. INCREASES THE AMPLITUDE OF
CC
CC
         EXCITATORY POSTSYNAPTIC POTENTIALS IN ABDOMINAL EXTENSOR MUSCLE.
CC
     -!- SIMILARITY: BELONGS TO THE FARP (FMRFAMIDE RELATED PEPTIDE)
CC
         FAMILY.
```

```
KW
     Neuropeptide; Amidation.
FΤ
     MOD RES
                7
                       7
                                  AMIDATION.
     SEQUENCE
SQ
                7 AA; 967 MW; 69D40729C4540AC0 CRC64;
  Query Match
                          40.0%; Score 2; DB 1; Length 7;
  Best Local Similarity 100.0%; Pred. No. 1.3e+05;
  Matches 2; Conservative 0; Mismatches 0; Indels
                                                               0; Gaps
Qу
            3 LR 4
             - 11
Db
            5 LR 6
RESULT 16
CAD1 ENTFA
     CAD1 ENTFA
ΙD
                    STANDARD;
                                   PRT; 8 AA.
AC
     P13268;
     01-JAN-1990 (Rel. 13, Created)
DT
DT
     01-JAN-1990 (Rel. 13, Last sequence update)
\mathsf{DT}
     01-FEB-1991 (Rel. 17, Last annotation update)
DE
     Sex pheromone CAD1.
OS
     Enterococcus faecalis (Streptococcus faecalis).
OC
     Bacteria; Firmicutes; Lactobacillales; Enterococcaceae; Enterococcus.
OX
     NCBI TaxID=1351;
RN
     [1]
RP
     SEQUENCE.
RX
     MEDLINE=85051889; PubMed=6437872;
     Mori M., Sagakami Y., Narita M., Isogai A., Fujino M., Kitada C.,
RA
     Craig R.A., Clewell D.B., Suzuki A.;
RA
RT
     "Isolation and structure of the bacterial sex pheromone, cAD1, that
     induces plasmid transfer in Streptococcus faecalis.";
RТ
RL
     FEBS Lett. 178:97-100(1984).
CC
     -!- FUNCTION: CAD1 IS INVOLVED IN THE CONJUGATIVE TRANSFER OF THE
CC
         HEMOLYSIN PLASMID PAD1.
KW
     Pheromone.
     SEQUENCE 8 AA; 819 MW; 047DD732C735B9C7 CRC64;
SQ
  Query Match
                         40.0%; Score 2; DB 1; Length 8;
  Best Local Similarity 100.0%; Pred. No. 1.3e+05;
          2; Conservative 0; Mismatches 0; Indels 0; Gaps
  Matches
           2 VL 3
Qу
              Db
           5 VL 6
RESULT 17
COW2 CONPU
     COW2 CONPU
ID
                   STANDARD;
                                  PRT;
                                           8 AA.
AC
     P58785;
    28-FEB-2003 (Rel. 41, Created)
DT
DT
    28-FEB-2003 (Rel. 41, Last sequence update)
\mathsf{DT}
    28-FEB-2003 (Rel. 41, Last annotation update)
DE
    Leu-contryphan-P.
OS
    Conus purpurascens (Purple cone).
OC
    Eukaryota; Metazoa; Mollusca; Gastropoda; Orthogastropoda;
OC
    Apogastropoda; Caenogastropoda; Sorbeoconcha; Hypsogastropoda;
```

```
OC
     Neogastropoda; Conoidea; Conidae; Conus.
OX
     NCBI TaxID=41690;
RN
     [1]
RP
     SEQUENCE, SYNTHESIS, AND MASS SPECTROMETRY.
RC
     STRAIN=Clipperton Island; TISSUE=Venom;
RX
     MEDLINE=99388839; PubMed=10461743;
     Jacobsen R.B., Jimenez E.C., De la Cruz R.G.C., Gray W.R., Cruz L.J.,
RA
RA
     Olivera B.M.;
     "A novel D-leucine-containing Conus peptide: diverse conformational
RT
RT
     dynamics in the contryphan family.";
RL
     J. Pept. Res. 54:93-99(1999).
CC
     -!- SUBCELLULAR LOCATION: Secreted.
     -!- TISSUE SPECIFICITY: Expressed by the venom duct.
CC
CC
     -!- MASS SPECTROMETRY: MW=888.4; METHOD=LSIMS.
CC
     -!- SIMILARITY: BELONGS TO THE CONTRYPHAN FAMILY.
KW
     Toxin; Hydroxylation; D-amino acid.
FT
     DISULFID
                 2
                          8
FT
     MOD RES
                   4
                          4
                                  D-LEUCINE.
SQ
     SEQUENCE
                8 AA; 890 MW; 75A367672732CEB8 CRC64;
  Query Match
                          40.0%; Score 2; DB 1; Length 8;
  Best Local Similarity 100.0%; Pred. No. 1.3e+05;
  Matches
            2; Conservative 0; Mismatches 0; Indels
                                                                  0; Gaps
                                                                              0;
            2 VL 3
Qу
            3 VL 4
RESULT 18
FAR1 PANRE
ID
     FAR1 PANRE
                    STANDARD;
                                   PRT;
                                            8 AA.
AC
     P41872;
DT
     01-NOV-1995 (Rel. 32, Created)
     01-NOV-1995 (Rel. 32, Last sequence update)
DT
DT
     01-NOV-1995 (Rel. 32, Last annotation update)
     FMRFamide-like neuropeptide PF1 (SDPNFLRF-amide).
DE
     Panagrellus redivivus.
OS
OC
     Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida;
OC
     Panagrolaimoidea; Panagrolaimidae; Panagrellus.
ΟX
     NCBI TaxID=6233;
RN
     [1]
RΡ
     SEQUENCE.
RX
     MEDLINE=93027659; PubMed=1408999;
RA
     Geary T.G., Price D.A., Bowman J.W., Winterrowd C.A., Mackenzie C.D.,
RA
     Garrison R.D., Williams J.F., Friedman A.R.;
RT
     "Two FMRFamide-like peptides from the free-living nematode
RT
     Panagrellus redivivus.";
     Peptides 13:209-214(1992).
RL
CC
     -!- FUNCTION: MYOACTIVE.
CC
     -!- TISSUE SPECIFICITY: NERVE CORDS AND PAIRED GROUPS OF CELLS LOCATED
CC
       CAUDALLY TO THE BASE OF THE PHARYNX.
CC
     -!- SIMILARITY: BELONGS TO THE FARP (FMRFAMIDE RELATED PEPTIDE)
CC
         FAMILY.
KW
     Neuropeptide; Amidation.
FΤ
    MOD RES
                  8
                        8
                                  AMIDATION.
SO
     SEQUENCE 8 AA; 995 MW; C6D40729C4576AB5 CRC64;
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Query Match
                           40.0%; Score 2; DB 1; Length 8;
  Best Local Similarity 100.0%; Pred. No. 1.3e+05;
            2; Conservative 0; Mismatches
  Matches
                                                 0; Indels
                                                                  0; Gaps
                                                                              0;
            3 LR 4
Qу
              11
            6 LR 7
Db
RESULT 19
FAR1 PENMO
ΙD
     FAR1 PENMO
                    STANDARD;
                                   PRT;
                                           8 AA.
AC
     P83316;
DT
     28-FEB-2003 (Rel. 41, Created)
DT
     28-FEB-2003 (Rel. 41, Last sequence update)
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
DE
     FMRFamide-like neuropeptide FLP1 (GDRNFLRF-amide).
OS
     Penaeus monodon (Penoeid shrimp).
OC
     Eukaryota; Metazoa; Arthropoda; Crustacea; Malacostraca;
OC
     Eumalacostraca; Eucarida; Decapoda; Dendrobranchiata; Penaeoidea;
OC
     Penaeidae; Penaeus.
OX
     NCBI TaxID=6687;
RN
     [1]
RP
     SEQUENCE, AND MASS SPECTROMETRY.
RC
     TISSUE=Eyestalk;
RX
     MEDLINE=21956277; PubMed=11959015;
     Sithigorngul P., Pupuem J., Krungkasem C., Longyant S.,
RA
     Chaivisuthangkura P., Sithigorngul W., Petsom A.;
RA
RT
     "Seven novel FMRFamide-like neuropeptide sequences from the eyestalk
RT
     of the giant tiger prawn Penaeus monodon.";
     Comp. Biochem. Physiol. 131B:325-337(2002).
RL
CC
     -!- SUBCELLULAR LOCATION: Secreted.
     -!- MASS SPECTROMETRY: MW=1024.8; METHOD=MALDI.
CC
     -!- SIMILARITY: BELONGS TO THE FARP (FMRFAMIDE RELATED PEPTIDE)
CC
CC
         FAMILY.
KW
     Neuropeptide; Amidation.
FT
     MOD RES
                   8
                          8
                                  AMIDATION.
SQ
     SEQUENCE 8 AA; 1024 MW; 72D40729C4540AA8 CRC64;
  Ouerv Match
                          40.0%; Score 2; DB 1; Length 8;
  Best Local Similarity 100.0%; Pred. No. 1.3e+05;
  Matches
           2; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                              0;
Qу
            3 LR 4
              11
Db
            6 LR 7
RESULT 20
FAR2 MACRS
ID
     FAR2 MACRS
                    STANDARD;
                                   PRT;
                                            8 AA.
AC
     P83275;
DT
     28-FEB-2003 (Rel. 41, Created)
\mathsf{D}\mathsf{T}
     28-FEB-2003 (Rel. 41, Last sequence update)
     28-FEB-2003 (Rel. 41, Last annotation update)
DT
DE
    FMRFamide-like neuropeptide FLP2 (ADKNFLRF-amide).
```

```
OS
     Macrobrachium rosenbergii (Giant fresh water prawn).
OC
     Eukaryota; Metazoa; Arthropoda; Crustacea; Malacostraca;
OC
     Eumalacostraca; Eucarida; Decapoda; Pleocyemata; Caridea;
OC
     Palaemonoidea; Palaemonidae; Macrobrachium.
OX
     NCBI TaxID=79674;
RN
     [1]
RР
     SEQUENCE, AND MASS SPECTROMETRY.
RC
     TISSUE=Eyestalk;
RA
     Sithigorngul P., Saraithongkum W., Jaideechoey S., Longyant S.,
RA
     Sithigorngul W.;
     "Novel FMRFamide-like neuropeptides from the eyestalk of the giant
RТ
RТ
     freshwater prawn Macrobrachium rosenbergii.";
     Comp. Biochem. Physiol. 120B:587-595(1998).
RL
     -!- MASS SPECTROMETRY: MW=1009.4; METHOD=MALDI.
CC
CC
     -!- SIMILARITY: BELONGS TO THE FARP (FMRFAMIDE RELATED PEPTIDE)
CC
         FAMILY.
DR
     GO; GO:0007218; P:neuropeptide signaling pathway; TAS.
KW
     Neuropeptide; Amidation.
FT
     MOD RES
                   8
                                  AMIDATION.
SQ
     SEQUENCE 8 AA; 1010 MW; 9CD40729C4433AAD CRC64;
  Query Match
                           40.0%; Score 2; DB 1; Length 8;
  Best Local Similarity
                          100.0%; Pred. No. 1.3e+05;
             2; Conservative 0; Mismatches
  Matches
                                                  0; Indels
                                                                  0; Gaps
                                                                               0;
Qу
            3 LR 4
              11
            6 LR 7
RESULT 21
FAR3 HOMAM
ΙD
     FAR3 HOMAM
                    STANDARD;
                                   PRT:
                                             8 AA.
AC
     P41486;
DТ
     01-NOV-1995 (Rel. 32, Created)
DT
     01-NOV-1995 (Rel. 32, Last sequence update)
DT
     01-NOV-1995 (Rel. 32, Last annotation update)
     FMRFamide-like neuropeptide 3 (FLI 3) (F2).
DE
OS
     Homarus americanus (American lobster).
     Eukaryota; Metazoa; Arthropoda; Crustacea; Malacostraca;
OC
OC
     Eumalacostraca; Eucarida; Decapoda; Pleocyemata; Astacidea;
OC
     Nephropoidea; Nephropidae; Homarus.
OX
     NCBI_TaxID=6706;
RN
     [1]
RΡ
     SEQUENCE.
RC
     TISSUE=Pericardial organs;
RX
     MEDLINE=88116164; PubMed=3429714;
RA
     Trimmer B.A., Kobierski L.A., Kravitz E.A.;
RT
     "Purification and characterization of FMRFamidelike immunoreactive
RT
     substances from the lobster nervous system: isolation and sequence
RT
     analysis of two closely related peptides.";
RL
     J. Comp. Neurol. 266:16-26(1987).
CC
     -!- MISCELLANEOUS: PERICARDIAL ORGANS RELEASE THIS PEPTIDE WITH 100 MM
CC
         POTASSIUM IN THE PRESENCE OF CALCIUM.
CC
     -!- SIMILARITY: BELONGS TO THE FARP (FMRFAMIDE RELATED PEPTIDE)
CC
         FAMILY.
    Neuropeptide; Amidation.
KW
```

```
MOD RES
                 8
                         8
                                 AMIDATION.
     SEQUENCE
                8 AA; 1054 MW; C6D40729C4540AB5 CRC64:
SQ
  Query Match
                          40.0%; Score 2; DB 1; Length 8;
  Best Local Similarity 100.0%; Pred. No. 1.3e+05;
          2; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
Qу
            3 LR 4
              Db
            6 LR 7
RESULT 22
FAR4 HOMAM
ΙD
     FAR4 HOMAM
                    STANDARD;
                                   PRT;
                                        8 AA.
AC
     P41487;
DT
     01-NOV-1995 (Rel. 32, Created)
DT
     01-NOV-1995 (Rel. 32, Last sequence update)
DT
     01-NOV-1995 (Rel. 32, Last annotation update)
DE
     FMRFamide-like neuropeptide 4 (FLI 4) (F1).
OS
     Homarus americanus (American lobster).
OC
     Eukaryota; Metazoa; Arthropoda; Crustacea; Malacostraca;
     Eumalacostraca; Eucarida; Decapoda; Pleocyemata; Astacidea;
OC
OC
     Nephropoidea; Nephropidae; Homarus.
OX
     NCBI TaxID=6706;
RN
     [1]
RP
     SEQUENCE.
RC
     TISSUE=Pericardial organs;
RX
     MEDLINE=88116164; PubMed=3429714;
RA
     Trimmer B.A., Kobierski L.A., Kravitz E.A.;
RT
     "Purification and characterization of FMRFamidelike immunoreactive
RT
     substances from the lobster nervous system: isolation and sequence
RT
     analysis of two closely related peptides.";
     J. Comp. Neurol. 266:16-26(1987).
RL
CC
     -!- FUNCTION: CAN ACT AS A MODULATOR OF EXOSKELETAL AND CARDIAC
CC
        NEUROMUSCULAR JUNCTIONS.
CC
     -!- SIMILARITY: BELONGS TO THE FARP (FMRFAMIDE RELATED PEPTIDE)
CC
         FAMILY.
KW
     Neuropeptide; Amidation.
FT
     MOD RES
                                 AMIDATION.
SO
     SEQUENCE 8 AA; 1067 MW; DDD40729C4540451 CRC64;
  Query Match
                          40.0%; Score 2; DB 1; Length 8;
  Best Local Similarity 100.0%; Pred. No. 1.3e+05;
  Matches
          2; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
                                                                             0;
            3 LR 4
Qу
Db
            6 LR 7
RESULT 23
FAR4 MACRS
ID
     FAR4 MACRS
                    STANDARD;
                                  PRT;
                                           8 AA.
AC
     P83277;
     28-FEB-2003 (Rel. 41, Created)
\mathsf{DT}
DT
     28-FEB-2003 (Rel. 41, Last sequence update)
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FT

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DT
      28-FEB-2003 (Rel. 41, Last annotation update)
 DE
      FMRFamide-like neuropeptide FLP4 (APALRLRF-amide).
 OS
     Macrobrachium rosenbergii (Giant fresh water prawn).
 OC
      Eukaryota; Metazoa; Arthropoda; Crustacea; Malacostraca;
      Eumalacostraca; Eucarida; Decapoda; Pleocyemata; Caridea;
 OC
 OC
      Palaemonoidea; Palaemonidae; Macrobrachium.
OX
     NCBI TaxID=79674;
RN
     [1]
     SEQUENCE, AND MASS SPECTROMETRY.
RP
RC
     TISSUE=Eyestalk;
     Sithigorngul P., Saraithongkum W., Jaideechoey S., Longyant S.,
RA
     Sithigorngul W.;
RA
RT
     "Novel FMRFamide-like neuropeptides from the eyestalk of the giant
RT
     freshwater prawn Macrobrachium rosenbergii.";
     Comp. Biochem. Physiol. 120B:587-595(1998).
RL
CC
     -!- MASS SPECTROMETRY: MW=943; METHOD=MALDI.
CC
     -!- SIMILARITY: BELONGS TO THE FARP (FMRFAMIDE RELATED PEPTIDE)
CC
DR
     GO; GO:0007218; P:neuropeptide signaling pathway; TAS.
KW
     Neuropeptide; Amidation.
FT
     MOD RES
                   8
                                   AMIDATION.
SO
     SEQUENCE 8 AA; 943 MW; 9CD40734072DC76D CRC64;
  Query Match
                           40.0%; Score 2; DB 1; Length 8;
  Best Local Similarity
                          100.0%; Pred. No. 1.3e+05;
  Matches
           2; Conservative 0; Mismatches
                                                  0; Indels
                                                                  0; Gaps
                                                                              0;
Ov
            3 LR 4
Dh
            4 LR 5
RESULT 24
BS43 SERPL
ID
     BS43 SERPL
                    STANDARD;
                                   PRT;
                                             9 AA.
AC
     P83375;
     28-FEB-2003 (Rel. 41, Created)
DT
     28-FEB-2003 (Rel. 41, Last sequence update)
DT
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
     Bacteriocin serracin P 43 kDa subunit (Fragment).
DE
OS
     Serratia plymuthica.
OC
     Bacteria; Proteobacteria; Gammaproteobacteria; Enterobacteriales;
OC
     Enterobacteriaceae; Serratia.
OX
     NCBI_TaxID=82996;
RN
     [1]
RP
     SEQUENCE, AND FUNCTION.
RC
     STRAIN=J7;
RX
     MEDLINE=22293561; PubMed=12406768;
     Jabrane A., Sabri A., Compere P., Jacques P., Vandenberghe I.,
RA
RA
     Van Beeumen J., Thonart P.;
RT
     "Characterization of serracin P, a phage-tail-like bacteriocin, and
RT
     its activity against Erwinia amylovora, the fire blight pathogen.";
RL
     Appl. Environ. Microbiol. 68:5704-5710(2002).
CC
     -!- FUNCTION: Major component of a prophage tail sheath (Probable).
     -!- FUNCTION: Antibacterial activity against Gram-negative bacterium
CC
CC
         E.amylovora.
     InterPro; IPR006498; Tail_tube.
DR
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```
DR
     Pfam; PF04985; Phage tube; 1.
KW
     Antibiotic; Bacteriocin.
FT
     NON TER
                  9
SO
     SEQUENCE 9 AA; 1095 MW; 1E66D412C871E1FB CRC64;
  Query Match
                          40.0%; Score 2; DB 1; Length 9;
  Best Local Similarity 100.0%; Pred. No. 1.3e+05;
            2; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
Qу
            2 VL 3
              Dh
            8 VL 9
RESULT 25
FAR2 PANRE
ID
     FAR2 PANRE
                    STANDARD;
                                   PRT;
                                            9 AA.
AC
     P41873;
DT
     01-NOV-1995 (Rel. 32, Created)
     01-NOV-1995 (Rel. 32, Last sequence update)
DT
     01-NOV-1995 (Rel. 32, Last annotation update)
DT
DE
     FMRFamide-like neuropeptide PF2 (SADPNFLRF-amide).
OS
     Panagrellus redivivus.
     Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida;
OC
OC
     Panagrolaimoidea; Panagrolaimidae; Panagrellus.
OX
     NCBI TaxID=6233;
RN
     [1]
RΡ
     SEQUENCE.
RX
     MEDLINE=93027659; PubMed=1408999;
RA
     Geary T.G., Price D.A., Bowman J.W., Winterrowd C.A., Mackenzie C.D.,
RA
     Garrison R.D., Williams J.F., Friedman A.R.:
RT
     "Two FMRFamide-like peptides from the free-living nematode
     Panagrellus redivivus.";
RT
RL
     Peptides 13:209-214(1992).
CC
     -!- FUNCTION: MYOACTIVE.
CC
     -!- TISSUE SPECIFICITY: NERVE CORDS AND PAIRED GROUPS OF CELLS LOCATED
CC
         CAUDALLY TO THE BASE OF THE PHARYNX.
CC
     -!- SIMILARITY: BELONGS TO THE FARP (FMRFAMIDE RELATED PEPTIDE)
CC
        FAMILY.
KW
     Neuropeptide; Amidation.
     MOD RES
FT
              9 9
                                 AMIDATION.
SQ
     SEQUENCE
                9 AA; 1066 MW; DA0B0729C4576AAD CRC64;
  Query Match
                          40.0%; Score 2; DB 1; Length 9;
 Best Local Similarity 100.0%; Pred. No. 1.3e+05;
 Matches
           2; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                            0;
Qу
            3 LR 4
              11
Db
            7 LR 8
RESULT 26
FAR3 MACRS
    FAR3 MACRS
ID
                   STANDARD;
                                  PRT;
                                           9 AA.
AC
    P83276;
DT
    28-FEB-2003 (Rel. 41, Created)
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DT
      28-FEB-2003 (Rel. 41, Last sequence update)
      28-FEB-2003 (Rel. 41, Last annotation update)
 \mathsf{DT}
DE
      FMRFamide-like neuropeptide FLP3 (NYDKNFLRF-amide).
OS
      Macrobrachium rosenbergii (Giant fresh water prawn).
OC
      Eukaryota; Metazoa; Arthropoda; Crustacea; Malacostraca;
OC
      Eumalacostraca; Eucarida; Decapoda; Pleocyemata; Caridea;
OC
      Palaemonoidea; Palaemonidae; Macrobrachium.
OX
      NCBI TaxID=79674;
RN
      [1]
RP
      SEQUENCE, AND MASS SPECTROMETRY.
RC
     TISSUE=Eyestalk;
     Sithigorngul P., Saraithongkum W., Jaideechoey S., Longyant S.,
RA
RA
     Sithigorngul W.;
RT
     "Novel FMRFamide-like neuropeptides from the eyestalk of the giant
     freshwater prawn Macrobrachium rosenbergii.";
RT
RL
     Comp. Biochem. Physiol. 120B:587-595(1998).
CC
     -!- MASS SPECTROMETRY: MW=1215.4; METHOD=MALDI.
CC
     -!- SIMILARITY: BELONGS TO THE FARP (FMRFAMIDE RELATED PEPTIDE)
CC
          FAMILY.
DR
     GO; GO:0007218; P:neuropeptide signaling pathway; TAS.
KW
     Neuropeptide; Amidation.
FT
     MOD RES
                                   AMIDATION.
SQ
     SEQUENCE
                 9 AA; 1216 MW; 18220729C4433ABB CRC64;
  Query Match
                           40.0%; Score 2; DB 1; Length 9;
  Best Local Similarity 100.0%; Pred. No. 1.3e+05;
             2; Conservative 0; Mismatches 0; Indels
  Matches
                                                                  0; Gaps
                                                                               0;
Qу
            3 LR 4
Db
            7 LR 8
RESULT 27
FAR3 PENMO
     FAR3 PENMO
                    STANDARD:
                                    PRT;
                                             9 AA.
AC
     P83318;
     28-FEB-2003 (Rel. 41, Created)
DT
     28-FEB-2003 (Rel. 41, Last sequence update)
DT
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
     FMRFamide-like neuropeptide FLP3 (AQPSMRLRF-amide).
DE
OS
     Penaeus monodon (Penoeid shrimp).
OC
     Eukaryota; Metazoa; Arthropoda; Crustacea; Malacostraca;
     Eumalacostraca; Eucarida; Decapoda; Dendrobranchiata; Penaeoidea;
OC.
OC
     Penaeidae; Penaeus.
OX
     NCBI TaxID=6687;
RN
     [1]
RΡ
     SEQUENCE, AND MASS SPECTROMETRY.
RC
     TISSUE=Eyestalk;
RX
     MEDLINE=21956277; PubMed=11959015;
RA
     Sithigorngul P., Pupuem J., Krungkasem C., Longyant S.,
RA
     Chaivisuthangkura P., Sithigorngul W., Petsom A.;
RT
     "Seven novel FMRFamide-like neuropeptide sequences from the eyestalk
RT
     of the giant tiger prawn Penaeus monodon.";
RL
     Comp. Biochem. Physiol. 131B:325-337(2002).
CC
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- MASS SPECTROMETRY: MW=1121.2; METHOD=MALDI.
```

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CC
     -!- SIMILARITY: BELONGS TO THE FARP (FMRFAMIDE RELATED PEPTIDE)
CC
         FAMILY.
KW
     Neuropeptide; Amidation.
FT
     MOD RES
               9
                      9
                                AMIDATION.
     SEQUENCE 9 AA; 1105 MW; CCD107340685A776 CRC64;
SO
                         40.0%; Score 2; DB 1; Length 9;
                         100.0%; Pred. No. 1.3e+05;
  Best Local Similarity
           2; Conservative 0; Mismatches 0; Indels 0; Gaps
  Matches
                                                                          0;
Qу
            3 LR 4
             Db
            7 LR 8
RESULT 28
FAR4 PENMO
ΙD
     FAR4 PENMO
                   STANDARD;
                                  PRT; 9 AA.
AC
     P83319;
DT
     28-FEB-2003 (Rel. 41, Created)
DT
     28-FEB-2003 (Rel. 41, Last sequence update)
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
     FMRFamide-like neuropeptide FLP4 (SQPSMRLRF-amide).
DE
OS
     Penaeus monodon (Penoeid shrimp).
OC
     Eukaryota; Metazoa; Arthropoda; Crustacea; Malacostraca;
     Eumalacostraca; Eucarida; Decapoda; Dendrobranchiata; Penaeoidea;
OC.
     Penaeidae; Penaeus.
OC
OX
     NCBI TaxID=6687;
RN
     [1]
RΡ
     SEQUENCE, AND MASS SPECTROMETRY.
RC
     TISSUE=Eyestalk;
RX
     MEDLINE=21956277; PubMed=11959015;
RA
     Sithigorngul P., Pupuem J., Krungkasem C., Longyant S.,
     Chaivisuthangkura P., Sithigorngul W., Petsom A.;
RT
     "Seven novel FMRFamide-like neuropeptide sequences from the eyestalk
RT
     of the giant tiger prawn Penaeus monodon.";
RL
     Comp. Biochem. Physiol. 131B:325-337(2002).
CC
     -!- SUBCELLULAR LOCATION: Secreted.
     -!- MASS SPECTROMETRY: MW=1119.8; METHOD=MALDI.
CC
     -!- SIMILARITY: BELONGS TO THE FARP (FMRFAMIDE RELATED PEPTIDE)
CC
CC
        FAMILY.
KW
    Neuropeptide; Amidation.
FT
    MOD RES
               9
                     9
                                AMIDATION.
    SEQUENCE 9 AA; 1121 MW; DA0B07340685A776 CRC64;
SO
  Query Match
                         40.0%; Score 2; DB 1; Length 9;
  Best Local Similarity 100.0%; Pred. No. 1.3e+05;
           2; Conservative 0; Mismatches 0; Indels 0; Gaps
 Matches
                                                                          0;
Qу
           3 LR 4
            Db
           7 LR 8
RESULT 29
FAR5 PENMO
ID FAR5 PENMO STANDARD; PRT;
                                          9 AA.
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AC
      P83320;
DT
      28-FEB-2003 (Rel. 41, Created)
DT
     28-FEB-2003 (Rel. 41, Last sequence update)
     28-FEB-2003 (Rel. 41, Last annotation update)
DT
DE
     FMRFamide-like neuropeptide FLP5 (SMPSLRLRF-amide).
OS
     Penaeus monodon (Penoeid shrimp).
OC
     Eukaryota; Metazoa; Arthropoda; Crustacea; Malacostraca;
OC
     Eumalacostraca; Eucarida; Decapoda; Dendrobranchiata; Penaeoidea;
OC
     Penaeidae; Penaeus.
OX
     NCBI TaxID=6687;
RN
     [1]
     SEQUENCE, AND MASS SPECTROMETRY.
RΡ
RC
     TISSUE=Eyestalk;
RX
     MEDLINE=21956277; PubMed=11959015;
     Sithigorngul P., Pupuem J., Krungkasem C., Longyant S.,
RA
RA
     Chaivisuthangkura P., Sithigorngul W., Petsom A.;
RT
     "Seven novel FMRFamide-like neuropeptide sequences from the eyestalk
RT
     of the giant tiger prawn Penaeus monodon.";
RL
     Comp. Biochem. Physiol. 131B:325-337(2002).
CC
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- MASS SPECTROMETRY: MW=1121.1; METHOD=MALDI.
     -!- SIMILARITY: BELONGS TO THE FARP (FMRFAMIDE RELATED PEPTIDE)
CC
CC
         FAMILY.
KW
     Neuropeptide; Amidation.
FT
     MOD RES
                   9
                         9
                                  AMIDATION.
SO
     SEQUENCE 9 AA; 1106 MW; B60B07340735A766 CRC64;
  Query Match
                           40.0%; Score 2; DB 1; Length 9;
  Best Local Similarity
                          100.0%; Pred. No. 1.3e+05;
  Matches
            2; Conservative
                               0; Mismatches
                                                 0; Indels
                                                                  0; Gaps
                                                                              0:
Qу
            3 LR 4
Dh
            5 LR 6
RESULT 30
FAR6 MACRS
ID
     FAR6 MACRS
                    STANDARD;
                                   PRT:
                                             9 AA.
AC
     P83279;
     28-FEB-2003 (Rel. 41, Created)
DT
     28-FEB-2003 (Rel. 41, Last sequence update)
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
     FMRFamide-like neuropeptide FLP6 (DGGRNFLRF-amide).
DE
OS
     Macrobrachium rosenbergii (Giant fresh water prawn).
OC
     Eukaryota; Metazoa; Arthropoda; Crustacea; Malacostraca;
OC
     Eumalacostraca; Eucarida; Decapoda; Pleocyemata; Caridea;
OC
     Palaemonoidea; Palaemonidae; Macrobrachium.
     NCBI TaxID=79674;
OX
RN
     [1]
RΡ
     SEQUENCE, AND MASS SPECTROMETRY.
RC
     TISSUE=Eyestalk;
RX
     MEDLINE=21107394; PubMed=11179812;
RA
     Sithigorngul P., Saraithongkum W., Longyant S., Panchan N.,
     Sithigorngul W., Petsom A.;
RA
     "Three more novel FMRFamide-like neuropeptide sequences from the
RT
RΤ
     eyestalk of the giant freshwater prawn Macrobrachium rosenbergii.";
```

```
RL
     Peptides 22:191-197(2001).
CC
     -!- MASS SPECTROMETRY: MW=1080.7; METHOD=MALDI.
CC
     -!- SIMILARITY: BELONGS TO THE FARP (FMRFAMIDE RELATED PEPTIDE)
CC
         FAMILY.
DR
     GO; GO:0007218; P:neuropeptide signaling pathway; IDA.
KW
     Neuropeptide; Amidation.
FT
     MOD RES
                                  AMIDATION.
SO
     SEOUENCE
                9 AA; 1081 MW; 26800729C4540878 CRC64;
  Query Match
                          40.0%; Score 2; DB 1; Length 9;
  Best Local Similarity
                          100.0%; Pred. No. 1.3e+05;
            2; Conservative 0; Mismatches 0; Indels
                                                                 0; Gaps
                                                                             0;
Qу
            3 LR 4
Db
            7 LR 8
RESULT 31
FAR8 MACRS
     FAR8 MACRS
                    STANDARD;
                                   PRT;
                                           9 AA.
AC
     P83281;
DT
     28-FEB-2003 (Rel. 41, Created)
DT
     28-FEB-2003 (Rel. 41, Last sequence update)
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
DE
     FMRFamide-like neuropeptide FLP8 (VSHNNFLRF-amide).
     Macrobrachium rosenbergii (Giant fresh water prawn).
OS
OC
     Eukaryota; Metazoa; Arthropoda; Crustacea; Malacostraca;
OC
     Eumalacostraca; Eucarida; Decapoda; Pleocyemata; Caridea;
OC
     Palaemonoidea; Palaemonidae; Macrobrachium.
OX
     NCBI TaxID=79674;
RN
     [1]
RΡ
     SEQUENCE, AND MASS SPECTROMETRY.
RC
     TISSUE=Eyestalk;
RX
     MEDLINE=21107394; PubMed=11179812;
RA
     Sithigorngul P., Saraithongkum W., Longyant S., Panchan N.,
     Sithigorngul W., Petsom A.;
RA
RT
     "Three more novel FMRFamide-like neuropeptide sequences from the
RT
     eyestalk of the giant freshwater prawn Macrobrachium rosenbergii.";
RL
     Peptides 22:191-197(2001).
     -!- MASS SPECTROMETRY: MW=1133.8; METHOD=MALDI.
CC
     -!- SIMILARITY: BELONGS TO THE FARP (FMRFAMIDE RELATED PEPTIDE)
CC
CC
         FAMILY.
     GO; GO:0007218; P:neuropeptide signaling pathway; IDA.
DR
KW
     Neuropeptide; Amidation.
FT
     MOD RES
                                 AMIDATION.
SQ
     SEQUENCE
                9 AA; 1133 MW; 845A0729C44441F5 CRC64;
  Query Match
                          40.0%; Score 2; DB 1; Length 9;
  Best Local Similarity 100.0%; Pred. No. 1.3e+05;
           2; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
                                                                             0;
            3 LR 4
Qу
Db
            7 LR 8
```

```
RESULT 32
FAR9 ASCSU
ID
     FAR9 ASCSU
                    STANDARD;
                                    PRT;
                                         9 AA.
AC
     P43172;
DT
     01-NOV-1995 (Rel. 32, Created)
DT
     01-NOV-1995 (Rel. 32, Last sequence update)
     01-FEB-1996 (Rel. 33, Last annotation update)
DT
DE
     FMRFamide-like neuropeptide AF9.
OS
     Ascaris suum (Pig roundworm) (Ascaris lumbricoides).
OC
     Eukaryota; Metazoa; Nematoda; Chromadorea; Ascaridida; Ascaridoidea;
OC
     Ascarididae; Ascaris.
OX
     NCBI TaxID=6253;
RN
     [1]
RP
     SEQUENCE.
     MEDLINE=95380362; PubMed=7651904;
RX
RA
     Cowden C., Stretton A.O.W.;
     "Eight novel FMRFamide-like neuropeptides isolated from the nematode
RT
RT
     Ascaris suum.";
RL
     Peptides 16:491-500(1995).
     -!- SIMILARITY: BELONGS TO THE FARP (FMRFAMIDE RELATED PEPTIDE)
CC
CC
KW
     Neuropeptide; Amidation.
FT
     MOD RES
                   9
                                  AMIDATION.
SO
     SEOUENCE
               9 AA; 1012 MW; 524F073774176877 CRC64;
  Query Match
                          40.0%; Score 2; DB 1; Length 9;
  Best Local Similarity
                          100.0%; Pred. No. 1.3e+05;
             2; Conservative
  Matches
                               0; Mismatches
                                                 0; Indels
                                                                  0; Gaps
                                                                              0;
Qу
            3 LR 4
Db
            7 LR 8
RESULT 33
FARP CALSI
ID
     FARP CALSI
                    STANDARD:
                                   PRT;
                                            9 AA.
AC
     P38495;
DT
     01-OCT-1994 (Rel. 30, Created)
     01-OCT-1994 (Rel. 30, Last sequence update)
DT
     01-NOV-1995 (Rel. 32, Last annotation update)
DE
     FMRFamide-like neuropeptide.
     Callinectes sapidus (Blue crab).
OS
OC
     Eukaryota; Metazoa; Arthropoda; Crustacea; Malacostraca;
OC
     Eumalacostraca; Eucarida; Decapoda; Pleocyemata; Brachyura;
OC
     Eubrachyura; Portunoidea; Portunidae; Callinectes.
OX
     NCBI TaxID=6763;
RN
     [1]
RP
     SEQUENCE.
     MEDLINE=92270479; PubMed=1815216;
RX
RA
     Krajniak K.G.;
     "The identification and structure-activity relations of a
RT
     cardioactive FMRFamide-related peptide from the blue crab Callinectes
RT
RT
     sapidus.";
RL
     Peptides 12:1295-1302(1991).
CC
     -!- FUNCTION: CARDIOACTIVE PEPTIDE.
     -!- SIMILARITY: BELONGS TO THE FARP (FMRFAMIDE RELATED PEPTIDE)
CC
```

```
CC
         FAMILY.
KW
    Neuropeptide; Amidation.
FT
    MOD RES
                          9
                                 AMIDATION.
     SEQUENCE 9 AA; 1159 MW; 134F0729D5A4045B CRC64;
SQ
  Query Match
                          40.0%; Score 2; DB 1; Length 9;
  Best Local Similarity 100.0%; Pred. No. 1.3e+05;
           2; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
                                                                             0;
            3 LR 4
Qу
            7 LR 8
Db
RESULT 34
FIBB ERYPA
ΙD
     FIBB ERYPA
                    STANDARD;
                                   PRT;
                                            9 AA.
AC
     P19346;
DT
     01-NOV-1990 (Rel. 16, Created)
DT
     01-NOV-1990 (Rel. 16, Last sequence update)
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
DE
     Fibrinogen beta chain [Contains: Fibrinopeptide B] (Fragment).
GN
OS
     Erythrocebus patas (Red guenon) (Hussar).
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Mammalia; Eutheria; Primates; Catarrhini; Cercopithecidae;
OC
     Cercopithecinae; Erythrocebus.
OX
     NCBI TaxID=9538;
RN
     [1]
RP
     SEQUENCE.
RX
     MEDLINE=85289140; PubMed=3928610;
RA
     Nakamura S., Takenaka O., Takahashi K.;
RT
     "Fibrinopeptides A and B of Japanese monkey (Macaca fuscata) and
RT
     patas monkey (Erythrocebus patas): their amino acid sequences,
RT
     restricted mutations, and a molecular phylogeny for macaques,
RT
     guenons, and baboons.";
RL
     J. Biochem. 97:1487-1492(1985).
CC
     -!- FUNCTION: FIBRINOGEN HAS A DOUBLE FUNCTION: YIELDING MONOMERS THAT
CC
         POLYMERIZE INTO FIBRIN AND ACTING AS A COFACTOR IN PLATELET
CC
         AGGREGATION.
CC
     -!- SUBUNIT: HEXAMER CONTAINING 2 SETS OF 3 NONIDENTICAL CHAINS
CC
         (ALPHA, BETA AND GAMMA), LINKED TO EACH OTHER BY DISULFIDE BONDS.
CC
     -!- MISCELLANEOUS: CONVERSION OF FIBRINOGEN TO FIBRIN IS TRIGGERED BY
CC
         THROMBIN, WHICH CLEAVES FIBRINOPEPTIDES A AND B FROM ALPHA & BETA
CC
         CHAINS, AND THUS EXPOSES THE N-TERMINAL POLYMERIZATION SITES
CC
         RESPONSIBLE FOR THE FORMATION OF THE SOFT CLOT.
DR
     PIR; D24180; D24180.
DR
     InterPro; IPR002181; Fibrinogen C.
     PROSITE; PS00514; FIBRIN AG C DOMAIN; PARTIAL.
DR
KW
     Blood coagulation; Plasma.
FT
     PEPTIDE
                   1
                                  FIBRINOPEPTIDE B.
FT
     NON TER
                   9
                          9
SQ
     SEQUENCE
                9 AA; 1020 MW; 69FE7879C732CB1B CRC64;
  Ouery Match
                          40.0%; Score 2; DB 1; Length 9;
  Best Local Similarity 100.0%; Pred. No. 1.3e+05;
  Matches
             2; Conservative 0; Mismatches 0; Indels
```

```
2 VL 3
Qу
            4 VL 5
Db
RESULT 35
BRK ONCMY
ΙD
     BRK ONCMY
                    STANDARD;
                                   PRT;
                                           10 AA.
AC
     Q9PRZ1;
DT
     16-OCT-2001 (Rel. 40, Created)
DT
     16-OCT-2001 (Rel. 40, Last sequence update)
DT
     16-OCT-2001 (Rel. 40, Last annotation update)
DE
     Lysyl-bradykinin-like.
     Oncorhynchus mykiss (Rainbow trout) (Salmo gairdneri).
OS
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
     Actinopterygii; Neopterygii; Teleostei; Euteleostei;
OC
OC
     Protacanthopterygii; Salmoniformes; Salmonidae; Oncorhynchus.
OX
     NCBI TaxID=8022;
RN
     [1]
RΡ
     SEQUENCE.
RX
     MEDLINE=94039817; PubMed=8224232;
RA
     Conlon J.M., Olson K.R.;
RT
     "Purification of a vasoactive peptide related to lysyl-bradykinin from
RT
     trout plasma.";
     FEBS Lett. 334:75-78(1993).
RL
CC
     -!- FUNCTION: SMOOTH MUSCLE CONTRACTION. PROBABLY PLAYS A ROLE FOR
CC
         THIS SYSTEM IN CARDIOVASCULAR REGULATION IN FISH.
CC
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- TISSUE SPECIFICITY: Plasma.
CC
     -!- SIMILARITY: BELONGS TO THE BRADYKININ FAMILY.
DR
     PIR; S39030; S39030.
     Bradykinin; Vasodilator.
KW
     SEQUENCE 10 AA; 1193 MW; 33C59075A3786777 CRC64;
SQ
  Query Match
                          40.0%; Score 2; DB 1; Length 10;
  Best Local Similarity 100.0%; Pred. No. 3.2e+03;
  Matches
            2; Conservative 0; Mismatches
                                                 0; Indels
Qу
            3 LR 4
              Db
            9 LR 10
RESULT 36
ESL LACCA
ΙD
     ESL LACCA
                    STANDARD;
                                   PRT;
                                           10 AA.
AC
     P81758;
     30-MAY-2000 (Rel. 39, Created)
DT
DT
     30-MAY-2000 (Rel. 39, Last sequence update)
DT
     30-MAY-2000 (Rel. 39, Last annotation update)
DE
     Putative esterase/lipase (EC 3.1.-.-) (Fragment).
OS
     Lactobacillus casei.
OC
     Bacteria; Firmicutes; Lactobacillales; Lactobacillaceae;
OC
     Lactobacillus.
OX
     NCBI TaxID=1582;
RN
     [1]
```

```
RΡ
     SEQUENCE.
RC
     STRAIN=IFPL731;
     Lopez de Felipe F.;
RA
RL
     Submitted (MAR-1999) to the SWISS-PROT data bank.
KW
     Hydrolase; Serine esterase.
FT
     NON TER
                 10
                        10
                10 AA; 1070 MW; 1C6132D732CAB1A0 CRC64;
SQ
     SEOUENCE
                          40.0%; Score 2; DB 1; Length 10;
  Query Match
  Best Local Similarity
                         100.0%; Pred. No. 3.2e+03;
  Matches
            2; Conservative 0; Mismatches 0; Indels
                                                                0; Gaps
                                                                             0:
Qу
            2 VL 3
Dh
            6 VL 7
RESULT 37
FAR2 PENMO
     FAR2 PENMO
                    STANDARD;
                                   PRT;
                                          10 AA.
AC
     P83317;
DT
     28-FEB-2003 (Rel. 41, Created)
DT
     28-FEB-2003 (Rel. 41, Last sequence update)
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
DE
     FMRFamide-like neuropeptide FLP2 (AYSNLNYLRF-amide).
OS
     Penaeus monodon (Penoeid shrimp).
OC
     Eukaryota; Metazoa; Arthropoda; Crustacea; Malacostraca;
OC
     Eumalacostraca; Eucarida; Decapoda; Dendrobranchiata; Penaeoidea;
OC
     Penaeidae; Penaeus.
OX
     NCBI_TaxID=6687;
RN
     [1]
RΡ
     SEQUENCE, AND MASS SPECTROMETRY.
RC
     TISSUE=Eyestalk;
RX
    MEDLINE=21956277; PubMed=11959015;
RA
     Sithigorngul P., Pupuem J., Krungkasem C., Longyant S.,
RA
     Chaivisuthangkura P., Sithigorngul W., Petsom A.;
RТ
     "Seven novel FMRFamide-like neuropeptide sequences from the eyestalk
RT
    of the giant tiger prawn Penaeus monodon.";
RL
    Comp. Biochem. Physiol. 131B:325-337(2002).
CC
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- MASS SPECTROMETRY: MW=1260.0; METHOD=MALDI.
CC
     -!- SIMILARITY: BELONGS TO THE FARP (FMRFAMIDE RELATED PEPTIDE)
CC
         FAMILY.
KW
    Neuropeptide; Amidation.
FT
    MOD RES
               10
                       10
                                 AMIDATION.
SQ
    SEQUENCE 10 AA; 1260 MW; 88F9023B54472455 CRC64;
                         40.0%; Score 2; DB 1; Length 10;
  Query Match
 Best Local Similarity
                         100.0%; Pred. No. 3.2e+03;
          2; Conservative 0; Mismatches 0; Indels 0; Gaps
 Matches
                                                                            0;
QУ
           3 LR 4
Db
           8 LR 9
```

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FAR5 MACRS
 ID
      FAR5 MACRS
                     STANDARD;
                                    PRT;
                                            10 AA.
AC
      P83278;
\mathsf{D}\mathsf{T}
      28-FEB-2003 (Rel. 41, Created)
DT
      28-FEB-2003 (Rel. 41, Last sequence update)
DT
      28-FEB-2003 (Rel. 41, Last annotation update)
DE
     FMRFamide-like neuropeptide FLP5 (DRTPALRLRF-amide).
     Macrobrachium rosenbergii (Giant fresh water prawn).
OS
OC
     Eukaryota; Metazoa; Arthropoda; Crustacea; Malacostraca;
OC
     Eumalacostraca; Eucarida; Decapoda; Pleocyemata; Caridea;
     Palaemonoidea; Palaemonidae; Macrobrachium.
OC
OX
     NCBI TaxID=79674;
RN
     [1]
     SEQUENCE, AND MASS SPECTROMETRY.
RP
RC
     TISSUE=Eyestalk;
     Sithigorngul P., Saraithongkum W., Jaideechoey S., Longyant S.,
RA
RA
     Sithigorngul W.;
RТ
      "Novel FMRFamide-like neuropeptides from the eyestalk of the giant
RT
     freshwater prawn Macrobrachium rosenbergii.";
RL
     Comp. Biochem. Physiol. 120B:587-595(1998).
CC
     -!- MASS SPECTROMETRY: MW=1243.4; METHOD=MALDI.
CC
     -!- SIMILARITY: BELONGS TO THE FARP (FMRFAMIDE RELATED PEPTIDE)
CC
         FAMILY.
     GO; GO:0007218; P:neuropeptide signaling pathway; TAS.
DR
KW
     Neuropeptide; Amidation.
FT
     MOD RES
                  10
                         10
                                   AMIDATION.
                10 AA; 1244 MW; 9A1A5334072DC771 CRC64;
SO
     SEQUENCE
  Query Match
                           40.0%; Score 2; DB 1; Length 10;
  Best Local Similarity 100.0%; Pred. No. 3.2e+03;
            2; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                               0;
            3 LR 4
Qу
              6 LR 7
RESULT 39
FAR7 MACRS
ΙD
     FAR7 MACRS
                    STANDARD;
                                   PRT;
                                            10 AA.
AC
     P83280:
DT
     28-FEB-2003 (Rel. 41, Created)
DT
     28-FEB-2003 (Rel. 41, Last sequence update)
     28-FEB-2003 (Rel. 41, Last annotation update)
DT
DE
     FMRFamide-like neuropeptide FLP7 (GYGDRNFLRF-amide).
OS
     Macrobrachium rosenbergii (Giant fresh water prawn).
OC
     Eukaryota; Metazoa; Arthropoda; Crustacea; Malacostraca;
OC
     Eumalacostraca; Eucarida; Decapoda; Pleocyemata; Caridea;
OC
     Palaemonoidea; Palaemonidae; Macrobrachium.
OX
     NCBI TaxID=79674;
RN
     [1]
RΡ
     SEQUENCE, AND MASS SPECTROMETRY.
RC
     TISSUE=Eyestalk;
RX
     MEDLINE=21107394; PubMed=11179812;
RA
     Sithigorngul P., Saraithongkum W., Longyant S., Panchan N.,
     Sithigorngul W., Petsom A.;
RA
RT
     "Three more novel FMRFamide-like neuropeptide sequences from the
```

```
RT
      eyestalk of the giant freshwater prawn Macrobrachium rosenbergii.";
RL
     Peptides 22:191-197(2001).
CC
     -!- MASS SPECTROMETRY: MW=1244.9; METHOD=MALDI.
     -!- SIMILARITY: BELONGS TO THE FARP (FMRFAMIDE RELATED PEPTIDE)
CC
CC
DR
     GO; GO:0007218; P:neuropeptide signaling pathway; IDA.
KW
     Neuropeptide; Amidation.
FT
     MOD RES
                  10
                         10
                                   AMIDATION.
SO
     SEQUENCE
                10 AA; 1244 MW; 3CFE9C29C4540AA8 CRC64;
  Query Match
                           40.0%; Score 2; DB 1; Length 10;
  Best Local Similarity
                          100.0%; Pred. No. 3.2e+03;
  Matches
            2; Conservative
                               0; Mismatches
                                                  0; Indels
                                                                  0; Gaps
                                                                               0:
Qу
            3 LR 4
Db
            8 LR 9
RESULT 40
FARP LOCMI
     FARP LOCMI
ID
                    STANDARD;
                                   PRT:
                                            10 AA.
AC
     P38553;
     01-OCT-1994 (Rel. 30, Created)
DT
DT
     01-OCT-1994 (Rel. 30, Last sequence update)
     30-MAY-2000 (Rel. 39, Last annotation update)
DT
     SchistoFLRFamide (PDVDHFLRF-amide) (Cardioexcitatory neuropeptide).
DE
OS
     Locusta migratoria (Migratory locust), and
OS
     Schistocerca gregaria (Desert locust).
OC
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
OC
     Neoptera; Orthopteroidea; Orthoptera; Caelifera; Acridomorpha;
OC
     Acridoidea; Acrididae; Oedipodinae; Locusta.
OX
     NCBI TaxID=7004, 7010;
RN
     [1]
RP
     SEQUENCE.
RC
     SPECIES=L.migratoria; TISSUE=Brain;
RX
     MEDLINE=93324430; PubMed=7687352;
RA
     Schoofs L., Holman G.M., Paemen L., Veelaert D., Amelinckx M.,
RA
     de Loof A.;
     "Isolation, identification, and synthesis of PDVDHFLRFamide
RT
     (SchistoFLRFamide) in Locusta migratoria and its association with the
RТ
     male accessory glands, the salivary glands, the heart, and the
RT
RT
     oviduct.";
RL
     Peptides 14:409-421(1993).
RN
     [2]
RΡ
     SEQUENCE.
RC
     SPECIES=S.gregaria; TISSUE=Thoracic nervous system;
RX
     MEDLINE=89246543; PubMed=2719702;
RA
     Robb S., Packman L.C., Evans P.D.;
RT
     "Isolation, primary structure and bioactivity of schistoflrf-amide, a
RT
     FMRF-amide-like neuropeptide from the locust, Schistocerca
RT
     gregaria.";
    Biochem. Biophys. Res. Commun. 160:850-856(1989).
RL
CC
     -!- FUNCTION: MUSCLE INHIBITING AGENT. INVOLVED IN THE NEURAL CONTROL
CC
         OF THE VISCERAL MUSCLES OF THE HEART, ACCESSORY GLANDS AND
CC
         OVIDUCT. MAY BE INVOLVED IN THE REGULATION OF SALIVA SECRETION.
     -!- TISSUE SPECIFICITY: FOUND IN AXONS OF THE MALE ACCESSORY GLANDS,
CC
```

```
CC
         THE SALIVARY GLANDS, THE HEART, AND THE OVIDUCT.
 CC
      -!- SIMILARITY: BELONGS TO THE FARP (FMRFAMIDE RELATED PEPTIDE)
 CC
         FAMILY.
 DR
     PIR; A32543; A32543.
KW
     Neuropeptide; Amidation.
 FΤ
     MOD RES
                  10
                         10
                                  AMIDATION.
SQ
     SEOUENCE
                10 AA; 1244 MW; D3C51729D2C1EAB2 CRC64;
  Query Match
                          40.0%; Score 2; DB 1; Length 10;
  Best Local Similarity
                          100.0%; Pred. No. 3.2e+03;
  Matches
            2; Conservative 0; Mismatches
                                                   0; Indels
                                                                  0; Gaps
                                                                              0:
Qу
            3 LR 4
Db
            8 LR 9
RESULT 41
FARP MANSE
ΙD
     FARP MANSE
                    STANDARD;
                                   PRT;
                                           10 AA.
AC
     P18523;
DT
     01-NOV-1990 (Rel. 16, Created)
DT
     01-FEB-1994 (Rel. 28, Last sequence update)
     28-FEB-2003 (Rel. 41, Last annotation update)
DT
DE
     FMRFamide-like neuropeptide.
     Manduca sexta (Tobacco hawkmoth) (Tobacco hornworm).
OS
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
OC
OC.
     Neoptera; Endopterygota; Lepidoptera; Glossata; Ditrysia; Sphingiodea;
OC
     Sphingidae; Sphinginae; Manduca.
OX
     NCBI_TaxID=7130;
RN
     [1]
RΡ
     SEQUENCE.
     MEDLINE=91045350; PubMed=2235684;
RX
     Kingan T.G., Teplow D.B., Phillips J.M., Riehm J.P., Rao K.R.,
RA
     Hildebrand J.G., Homberg U., Kammer A.E., Jardine I., Griffin P.R.,
RA
RA
     Hunt D.F.;
RT
     "A new peptide in the FMRFamide family isolated from the CNS of the
RT
     hawkmoth, Manduca sexta.";
RL
     Peptides 11:849-856(1990).
     -!- FUNCTION: INCREASES THE FORCE OF NEURALLY EVOKED CONTRACTIONS IN
CC
         THE MAJOR POWER-PRODUCING FLIGHT MUSCLES, THE DORSAL LONGITUDINAL
CC
CC
         MUSCLES AND SO IS LIKELY TO PLAY A ROLE IN SUSTAINING OR PROMOTING
CC
         FLIGHT BEHAVIOR PATTERNS.
CC
     -!- SIMILARITY: BELONGS TO THE FARP (FMRFAMIDE RELATED PEPTIDE)
CC
         FAMILY.
DR
     PIR; A43977; A43977.
KW
     Amidation; Neuropeptide; Pyrrolidone carboxylic acid.
FT
     MOD RES
                                 PYRROLIDONE CARBOXYLIC ACID.
                   1
                         1
     MOD RES
FT
                  10
                         10
                                  AMIDATION.
SO
     SEQUENCE
                10 AA; 1247 MW; D3C45229D5B1F2D2 CRC64;
  Query Match
                          40.0%; Score 2; DB 1; Length 10;
  Best Local Similarity 100.0%; Pred. No. 3.2e+03;
           2; Conservative 0; Mismatches
                                                 0; Indels
                                                                 0; Gaps
QУ
```

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RESULT 42
LCMS LEUMA
    LCMS LEUMA
                                   PRT;
                                          10 AA.
ID
                    STANDARD;
AC
     P21144; P41497;
     01-MAY-1991 (Rel. 18, Created)
DT
DT
     01-FEB-1994 (Rel. 28, Last sequence update)
     28-FEB-2003 (Rel. 41, Last annotation update)
DT
DE
     Leucomyosuppressin (LMS) (LeM-MS).
     Leucophaea maderae (Madeira cockroach).
OS
OC
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
OC
     Neoptera; Orthopteroidea; Dictyoptera; Blattaria; Blaberoidea;
OC
     Blaberidae; Leucophaea.
     NCBI TaxID=6988;
OX
RN
     [1]
RΡ
     SEQUENCE, AND SYNTHESIS.
RC
     TISSUE=Head;
RA
     Holman G.M., Cook B.J., Nachman R.J.;
RT
     "Isolation, primary structure and synthesis of leucomyosuppressin,
     an insect neuropeptide that inhibits spontaneous contractions of the
RT
RT
     cockroach hindgut.";
RL
     Comp. Biochem. Physiol. 85C:329-333(1986).
CC
     -!- FUNCTION: INHIBITS THE SPONTANEOUS CONTRACTIONS OF COCKROACH
CC
         PROTODEUM (HINDGUT).
KW
     Neuropeptide; Amidation; Pyrrolidone carboxylic acid.
FT
     MOD RES
                                  PYRROLIDONE CARBOXYLIC ACID.
                  1
                         1
FT
     MOD RES
                  10
                         10
                                  AMIDATION.
SQ
     SEQUENCE
                10 AA; 1275 MW; D3C45229D2C1EAB2 CRC64;
  Query Match
                          40.0%; Score 2; DB 1; Length 10;
                          100.0%; Pred. No. 3.2e+03;
  Best Local Similarity
            2; Conservative 0; Mismatches 0;
                                                       Indels
                                                                  0; Gaps
                                                                              0:
            3 LR 4
Qу
              - 1-1
            8 LR 9
Db
RESULT 43
PORB METTM
ID
     PORB METTM
                    STANDARD;
                                   PRT;
                                            10 AA.
AC
     P80901;
DT
     01-NOV-1997 (Rel. 35, Created)
DT
     01-NOV-1997 (Rel. 35, Last sequence update)
DT
     15-SEP-2003 (Rel. 42, Last annotation update)
     Pyruvate synthase subunit porB (EC 1.2.7.1) (Pyruvate oxidoreductase
DE
DE
     beta chain) (POR) (Pyruvic-ferredoxin oxidoreductase beta subunit)
DΕ
     (Fragment).
GN
     PORB.
OS
     Methanobacterium thermoautotrophicum (strain Marburg / DSM 2133).
     Archaea; Euryarchaeota; Methanobacteria; Methanobacteriales;
OC
OC
     Methanobacteriaceae; Methanothermobacter.
     NCBI TaxID=79929;
OX
     [1]
RN
RΡ
     SEQUENCE.
```

```
RX
    MEDLINE=97261844; PubMed=9108258;
RA
    Tersteegen A., Linder D., Thauer R.K., Hedderich R.;
RT
     "Structures and functions of four anabolic 2-oxoacid oxidoreductases
RT
     in Methanobacterium thermoautotrophicum.";
RL
    Eur. J. Biochem. 244:862-868(1997).
CC
     -!- CATALYTIC ACTIVITY: Pyruvate + CoA + oxidized ferredoxin = acetyl-
CC
         CoA + CO(2) + reduced ferredoxin.
CC
     -!- SUBUNIT: HETEROTETRAMER OF ONE ALPHA, ONE BETA, ONE DELTA AND ONE
CC
        GAMMA CHAIN.
CC
     -!- MISCELLANEOUS: As a pH optimum of 10.0 and an optimal temperature
CC
         of 80 degrees Celsius.
KW
    Oxidoreductase.
FT
    NON TER
                  1.0
                         10
    SEQUENCE 10 AA; 1232 MW; 167011DAF6DB0760 CRC64;
SQ
 Query Match
                          40.0%; Score 2; DB 1; Length 10;
 Best Local Similarity 100.0%; Pred. No. 3.2e+03;
 Matches
           2; Conservative 0; Mismatches 0; Indels
                                                              0; Gaps
            3 LR 4
Qу
             -11
Db
            9 LR 10
RESULT 44
TKU1 UREUN
    TKU1 UREUN
                    STANDARD;
                                   PRT;
ΙD
AC
    P40751;
\mathsf{DT}
    01-FEB-1995 (Rel. 31, Created)
DT
     01-FEB-1995 (Rel. 31, Last sequence update)
    15-SEP-2003 (Rel. 42, Last annotation update)
DT
DE
    Urechistachykinin I.
OS
    Urechis unicinctus.
OC
     Eukaryota; Metazoa; Echiura; Xenopneusta; Urechidae; Urechis.
OX
    NCBI_TaxID=6432;
RN
    [1]
RP
     SEQUENCE, AND SYNTHESIS.
RC
    TISSUE=Ventral nerve cord;
RX
    MEDLINE=93236558; PubMed=8476410;
     Ikeda T., Minakata H., Nomoto K., Kubota I., Muneoka Y.;
RA
RT
     "Two novel tachykinin-related neuropeptides in the echiuroid worm,
RT
    Urechis unicinctus.";
RL
     Biochem. Biophys. Res. Commun. 192:1-6(1993).
CC
     -!- FUNCTION: CONTRACTILE ACTION ON THE INNER CIRCULAR BODY-WALL
CC
         MUSCLE OF THE ANIMAL.
CC
     -!- SUBCELLULAR LOCATION: Secreted.
CC
     -!- SIMILARITY: SOME SIMILARITY TO TACHYKININS.
KW
     Tachykinin; Neuropeptide; Amidation.
FT
    MOD RES
                 10
                        10
                                  AMIDATION.
SQ
              10 AA; 1177 MW; C6D1C462C9D6C5A6 CRC64;
     SEOUENCE
  Query Match
                          40.0%; Score 2; DB 1; Length 10;
 Best Local Similarity 100.0%; Pred. No. 3.2e+03;
           2; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                             0;
            3 LR 4
Qу
```

```
RESULT 45
UPA5 HUMAN
     UPA5 HUMAN
                    STANDARD;
                                   PRT;
                                          10 AA.
AC
     P30091;
DT
     01-APR-1993 (Rel. 25, Created)
     01-APR-1993 (Rel. 25, Last sequence update)
DT
DT
     16-OCT-2001 (Rel. 40, Last annotation update)
DΕ
     Unknown protein from 2D-page of plasma (Spot 13) (Fragment).
OS
     Homo sapiens (Human).
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OC
OX
     NCBI TaxID=9606;
RN
     [1]
RP
     SEQUENCE.
RC
     TISSUE=Plasma;
     MEDLINE=93092937; PubMed=1459097;
RX
RA
     Hughes G.J., Frutiger S., Paquet N., Ravier F., Pasquali C.,
     Sanchez J.-C., James R., Tissot J.-D., Bjellqvist B.,
RA
RA
     Hochstrasser D.F.;
     "Plasma protein map: an update by microsequencing.";
RT
RL
     Electrophoresis 13:707-714(1992).
CC
     -!- MISCELLANEOUS: ON THE 2D-GEL THE DETERMINED PI OF THIS UNKNOWN
         PROTEIN IS: 4.85, ITS MW IS: 40 kDa.
CC
CC
     -!- MISCELLANEOUS: THIS SPOT IS ON A POSITION THOUGHT TO BE THAT OF
         ZN-ALPHA-2 GLYCOPROTEIN, BUT IT DOES NOT CORRESPOND TO THAT
CC
CC
         PROTEIN.
     SWISS-2DPAGE; P30091; HUMAN.
DR
FT
     NON TER
                   1
                         1
     VARIANT
                   9
FT
                          9
                                  G \rightarrow Y.
FT
                                  /FTId=VAR 000002.
     NON TER
FT
                  10
                         10
SO
     SEOUENCE
              10 AA; 1109 MW; C3DA94C732C32776 CRC64;
                          40.0%; Score 2; DB 1; Length 10;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 3.2e+03;
  Matches
            2; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                              0;
            2 VL 3
QУ
Db
            6 VL 7
RESULT 46
ES1 RAT
                                   PRT;
ΙD
     ES1 RAT
                    STANDARD;
                                            11 AA.
AC
     P56571;
DT
     15-DEC-1998 (Rel. 37, Created)
     15-DEC-1998 (Rel. 37, Last sequence update)
DT
     16-OCT-2001 (Rel. 40, Last annotation update)
DE
     ES1 protein, mitochondrial (Fragment).
     Rattus norvegicus (Rat).
OS
OC
     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC
     Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
OX
     NCBI TaxID=10116;
```

```
RN
    [1]
RP
    SEQUENCE.
RC
    STRAIN=Wistar; TISSUE=Heart;
    Li X.-P., Pleissner K.-P., Scheler C., Regitz-Zagrosek V., Salikov J.,
RA
RA
    Jungblut P.R.;
    Submitted (SEP-1998) to the SWISS-PROT data bank.
RL
CC
    -!- SUBCELLULAR LOCATION: Mitochondrial (Potential).
     -!- MISCELLANEOUS: ON THE 2D-GEL THE DETERMINED PI OF THIS PROTEIN
CC
         (SPOT P2) IS: 8.9, ITS MW IS: 25 kDa.
CC
CC
    -!- SIMILARITY: BELONGS TO THE ES1 FAMILY.
KW
    Mitochondrion.
FT
    NON TER
               11
                        11
              11 AA; 1142 MW; D862272D32C72DC2 CRC64;
SO
     SEOUENCE
                         40.0%; Score 2; DB 1; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 3.5e+03;
          2; Conservative 0; Mismatches 0; Indels
                                                             0; Gaps
                                                                          0;
           2 VL 3
Qу
              7 VL 8
Dh
RESULT 47
FAR6 PENMO
                               PRT;
                                         11 AA.
ID
     FAR6 PENMO
                   STANDARD;
AC
     P83321;
     28-FEB-2003 (Rel. 41, Created)
DT
     28-FEB-2003 (Rel. 41, Last sequence update)
DT
     28-FEB-2003 (Rel. 41, Last annotation update)
DT
DE
     FMRFamide-like neuropeptide FLP6 (DGRTPALRLRF-amide).
OS
     Penaeus monodon (Penoeid shrimp).
     Eukaryota; Metazoa; Arthropoda; Crustacea; Malacostraca;
OC
     Eumalacostraca; Eucarida; Decapoda; Dendrobranchiata; Penaeoidea;
OC
OC
     Penaeidae; Penaeus.
OX
     NCBI TaxID=6687;
RN
     [1]
     SEQUENCE, AND MASS SPECTROMETRY.
RP
RC
     TISSUE=Eyestalk;
     MEDLINE=21956277; PubMed=11959015;
RX
     Sithigorngul P., Pupuem J., Krungkasem C., Longyant S.,
RA
     Chaivisuthangkura P., Sithigorngul W., Petsom A.;
RA
RT
     "Seven novel FMRFamide-like neuropeptide sequences from the eyestalk
     of the giant tiger prawn Penaeus monodon.";
RT
     Comp. Biochem. Physiol. 131B:325-337(2002).
RL
     -!- SUBCELLULAR LOCATION: Secreted.
CC
CC
     -!- MASS SPECTROMETRY: MW=1301.8; METHOD=MALDI.
     -!- SIMILARITY: BELONGS TO THE FARP (FMRFAMIDE RELATED PEPTIDE)
CC
CC
         FAMILY.
     Neuropeptide; Amidation.
KW
FT
                 11
                                 AMIDATION.
     MOD RES
                        11
SO
     SEQUENCE
                11 AA; 1301 MW; 9A19C860072DC771 CRC64;
                          40.0%; Score 2; DB 1; Length 11;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 3.5e+03;
                                                                            0;
             2; Conservative 0; Mismatches 0; Indels
                                                              0; Gaps
```

```
3 LR 4
Qу
            7 LR 8
Db
RESULT 48
RR16 GINBI
    RR16 GINBI
                 STANDARD;
                               PRT; 12 AA.
AC
    P36207;
DT
    01-JUN-1994 (Rel. 29, Created)
DT
    01-JUN-1994 (Rel. 29, Last sequence update)
DT
    28-FEB-2003 (Rel. 41, Last annotation update)
DE
    Chloroplast 30S ribosomal protein S16 (Fragment).
GN
    RPS16.
    Ginkgo biloba (Ginkgo).
OS
OG
    Chloroplast.
    Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
OC
    Spermatophyta; Ginkgophyta; Ginkgoales; Ginkgoaceae; Ginkgo.
OC
OX
    NCBI TaxID=3311;
RN
    [1]
    SEQUENCE FROM N.A.
RΡ
    MEDLINE=95094313; PubMed=8001171;
RX
    Richard M., Tremblay C., Bellemare G.;
RA
    "Chloroplastic genomes of Ginkgo biloba and Chlamydomonas moewusii
RТ
    contain a chlB gene encoding one subunit of a light-independent
RT
    protochlorophyllide reductase.";
RT
    Curr. Genet. 26:159-165(1994).
RL
     -!- SIMILARITY: BELONGS TO THE S16P FAMILY OF RIBOSOMAL PROTEINS.
CC
     _____
CC
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DR
     EMBL; U01531; AAA66977.1; -.
    HAMAP; MF 00385; -; 1.
DR
     InterPro; IPR000307; Ribosomal S16.
DR
     PROSITE; PS00732; RIBOSOMAL S16; 1.
KW
    Ribosomal protein; Chloroplast.
FT
    NON_TER
              12
                      12
SO
     SEQUENCE 12 AA; 1488 MW; 6700EDAF9D033734 CRC64;
                        40.0%; Score 2; DB 1; Length 12;
  Query Match
  Best Local Similarity 100.0%; Pred. No. 3.8e+03;
           2; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
  Matches
           3 LR 4
Qу
            - 11
Db
           4 LR 5
RESULT 49
TM2A METMA
ID TM2A_METMA STANDARD; PRT; 12 AA.
```

```
AC
     P80652:
     01-OCT-1996 (Rel. 34, Created)
DT
     01-OCT-1996 (Rel. 34, Last sequence update)
DT
     16-OCT-2001 (Rel. 40, Last annotation update)
DΤ
DΕ
     Alternative tetrahydromethanopterin S-methyltransferase 28 kDa subunit
DΕ
     (EC 2.1.1.86) (N5-methyltetrahydromethanopterin--coenzyme M
DΕ
     methyltransferase 28 kDa subunit) (Fragment).
OS
     Methanosarcina mazei (Methanosarcina frisia).
OC
     Archaea; Euryarchaeota; Euryarchaeota orders incertae sedis;
OC
     Methanosarcinales; Methanosarcinaceae; Methanosarcina.
OX
     NCBI TaxID=2209;
RN
     [1]
RΡ
     SEQUENCE.
RC
     STRAIN=Goel / Gol / ATCC BAA-199 / DSM 3647 / OCM 88;
RX
     MEDLINE=96370840; PubMed=8774736;
     Lienard T., Becher B., Marschall M., Bowien S., Gottschalk G.;
RA
RТ
     "Sodium ion translocation by N5-methyltetrahydromethanopterin:
RT
     coenzyme M methyltransferase from Methanosarcina mazei Gol
RT
     reconstituted in ether lipid liposomes.";
RL
     Eur. J. Biochem. 239:857-864(1996).
CC
     -!- FUNCTION: THIS ENZYME COMPLEX CATALYZES AN INTERMEDIATE STEP IN
CC
         METHANOGENESIS, THE FORMATION OF METHYL-COENZYME M AND
CC
         TETRAHYDROMETHANOPTERIN FROM COENZYME M AND N5-METHYL-
CC
         TETRAHYDROMETHANOPTERIN.
CC
     -!- CATALYTIC ACTIVITY: 5-methyl-5,6,7,8-tetrahydromethanopterin + 2-
CC
         mercaptoethanesulfonate = 5,6,7,8-tetrahydromethanopterin + 2-
CC
         (methylthio) ethanesulfonate.
CC
     -!- SUBUNIT: COMPOSED OF SIX DIFFERENT SUBUNITS.
CC
     -!- SUBCELLULAR LOCATION: Integral membrane protein.
KW
     Transferase; Methyltransferase; Transmembrane; Methanogenesis.
FT
                  12
                        12
SQ
     SEQUENCE
                12 AA; 1321 MW; 6DE4A5766232D76B CRC64;
  Query Match
                          40.0%; Score 2; DB 1; Length 12;
  Best Local Similarity
                          100.0%; Pred. No. 3.8e+03;
                                                                  0; Gaps
  Matches
           2; Conservative 0; Mismatches 0; Indels
                                                                              0;
            2 VL 3
QУ
              7 VL 8
RESULT 50
CRBL VESCR
ΙD
     CRBL VESCR
                    STANDARD;
                                   PRT;
                                           13 AA.
AC
     P01518;
DT
     21-JUL-1986 (Rel. 01, Created)
DT
     21-JUL-1986 (Rel. 01, Last sequence update)
     28-FEB-2003 (Rel. 41, Last annotation update)
DT
DE
     Crabrolin.
OS
     Vespa crabro (European hornet).
OC
     Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
0C
     Neoptera; Endopterygota; Hymenoptera; Apocrita; Aculeata; Vespoidea;
0C
     Vespidae; Vespinae; Vespa.
     NCBI TaxID=7445;
OX
RN
     [1]
RΡ
     SEQUENCE.
```

```
RC
    TISSUE=Venom;
    MEDLINE=84289390; PubMed=6206053;
RX
RA
    Argiolas A., Pisano J.J.;
    "Isolation and characterization of two new peptides, mastoparan C and
RT
    crabrolin, from the venom of the European hornet, Vespa crabro.";
RT
    J. Biol. Chem. 259:10106-10111(1984).
RL
RN
    SYNTHESIS, AND ANTIMICROBIAL ACTIVITY.
RP
    MEDLINE=97419326; PubMed=9273892;
RX
RA
    Krishnakumari V., Nagaraj R.;
    "Antimicrobial and hemolytic activities of crabrolin, a 13-residue"
RT
    peptide from the venom of the European hornet, Vespa crabro, and its
RT
    analogs.";
RT
    J. Pept. Res. 50:88-93(1997).
RL
     -!- FUNCTION: Mast cell degranulating peptide. Induces the chemotaxis
CC
         of neutrophils. Has antimicrobial and hemolytic activity.
CC
     PIR; A01781; JZVHP1.
DR
     Mast cell degranulation; Chemotaxis; Amidation; Antibiotic.
KW
                                 AMIDATION.
FT
     MOD RES
                 13
                       13
     SEQUENCE 13 AA; 1497 MW; 515EF8FCEA8D2407 CRC64;
SQ
                         40.0%; Score 2; DB 1; Length 13;
  Ouery Match
                         100.0%; Pred. No. 4.1e+03;
  Best Local Similarity
          2; Conservative 0; Mismatches 0; Indels 0; Gaps
                                                                            0;
  Matches
            3 LR 4
Qу
              6 LR 7
Db
```

Search completed: November 28, 2003, 15:39:51

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